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ABSTRACT

Educationally, pastoralists appear to be a paradox. From the perspective of official education, they are a complete failure, scoring badly in terms of enrollment, achievement, attainment, and gender balance. However, pastoralists are far from being unskilled. Their daily lives require them to perform tasks involving high levels of individual and social specialization. A consideration of this paradox should be central to analyses of the continuous failure, with regard to nomads, of the universal project of education. Instead, education programs appear to oppose nomadic culture at all levels--from principles and goals to evaluation. As a universal project, education has had a very broad goal of the fulfillment of all individuals as human beings and a very narrow view of educational structure and content. With regard to education of nomads, this literature review suggests that such attitude should be reversed to a broader view and focused goals. Policies should expand the view from statistics and the classroom to education as a broad phenomenon. Education for nomads should be flexible, multifaceted, and focused enough to target specific structural problems such as social and economic marginalization, lack of political representation, or coping and interacting successfully with the challenges of globalization. Sections of this literature review cover the educational rationale (education as basic need and right, education for development and integration); practical problems and solutions (mobility, remoteness, poverty, sparse population, distance education, staff, motivation, language); cultural problems (conservatism, ignorance, child labor, cultural alienation, education of girls, parent choice, relevance); impact and outcomes of education; a

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Mongolia case study; and key issues for future policy. (Contains 194 references.) (TD)

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EDUCATION PROVISION TO NOMADIC PASTORALISTS

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A LITERATURE REVIEW

IDS Working Paper 126

Saverio Krätli

SUMMARY

Educationally, pastoralists appear to be a paradox. From the point of view of official education they are a complete failure: in terms of enrolment, attendance, classroom performance, achievement, continuity to higher education and gender balance they regularly score at the bottom of the ladder. However, pastoralists although poor (some of them) are far from being a mass of drifting unskilled under-class as they should be according to the popular understanding of basic education as a fundamental need. On the contrary, as a necessary requirement for their livelihood in the drylands, pastoralists perform every day high levels of individual and social specialisation. They can be very confident, articulate and entrepreneurial, have good negotiating and management skills, and show a strong sense of dignity and self-respect. Their societies usually have long traditions of self-government, with sophisticated institutional structures and exceptionally high levels of social capital. A consideration for this paradox should be at the centre of every analysis of the continuous failure, with regard to nomads, of the universal project of education. Instead, education programmes appear to oppose nomadic culture at all levels: in their principles and goals, in their explanatory paradigms; in their solutions and implementation; in their approach to evaluation. To date, as a universal project education has had a very broad goal – the fulfilment of all individuals as human beings – and a very narrow view – the structure and content of the service. With regard to education of nomads, this review of the literature suggests that such attitude should be reversed: there is a need for a broader view and focused goals. Policies should expand the view from statistics and the classroom to education as a broad phenomenon. This will offer the important advantage of including in the field of vision situations and dimensions that to date have been largely overlooked but that appear to influence both the way education is received and its potential for fighting poverty. At the same time, education for nomads should be flexible, multifaced and focussed enough to target specific structural problems such as social and economic marginalisation, lack of political representation or coping and interacting successfully with the new challenges raised by globalisation.

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CONTENTS

EXECUTIVE SUMMARY 7

INTRODUCTION 11

PART 1 CURRENT TRAJECTORIES AND MAJOR ISSUES 13

1 Why – The Educational Rationale 13

1.1 A Basic Need and a Fundamental Right 13

Empowerment and inclusion 14

1.2 Development and Integration 15

Education for sedentarisation 16

Education for modernisation 17

Poverty and impoverishment 21

Additional knowledge or trade-off 22

Literacy and information 23

Education for state building 24

Non-formal education 24

2 How – The Educational Encounter 27

2.1 Practical Problems (and Solutions) 28

Mobility and boarding schools 28

Remoteness and self-sufficient schools 29

Nomadism and mobile schools 30

Schools and cash 31

Poverty and school feeding programmes 32

Sparse population and distance education 32

Security 33

Staff and motivation 34

Language 34

2.2 Cultural Problems 35

Conservatism 35

Ignorance 36

Child labour 37

Cultural alienation 38

Education of girls 39

Parental selection 40

Demand for education 42

Curriculum relevance 43

3 What – The Impact of Education 46

Quality of data 46

The 'impact' of education 47

Achievements and outcomes 47

Education and social capital 48

Education and 'indigenous' knowledge 49

The culture of education 52

Curriculum relevance and traditional knowledge 52

Education and resources for change 53

PART 2 MONGOLIA CASE STUDY 55

Introduction 55

1 Background Information 55

2 Outcomes 57

2.1 Reasons for High Enrolment during Socialism 57

Culture 57

Schooling and sedentary life 58

Culture rather than policy 59

Organisation of labour 59

Law enforcement 60

Organisation of the education system 60

2.2 Reasons for the Increase of Out-of-School Children after 1990 61

Organisation of labour 61

Organisation of the school system 62

Cultural change 63

3 Conclusions 65

PART 3 KEY ISSUES FOR FUTURE POLICY 67

3.1 The paradox of nomad education 67

3.2 Education and productivity 67

3.3 Education policies and nomad culture 68

3.4 Successful formal education programmes for nomads 69

3.5 Successful non-formal education programme for nomads 69

3.6 Education and pastoral livelihood 70

3.7 A broader view 70

3.8 More specific goals 71

3.9 Cultural identity and education 71

3.10 The next step 72

REFERENCES 73

BOXES

Box 1 Education for assimilation or for adaptation? 20

Box 2 Education for development or development for education?
The educational policy in Kenya during the 1980s 22

Box 3 The out-of-school Programme (OOS) in Samburu district, Kenya 25

Box 4 Boarding schools in Mongolia 29

Box 5 Tent schools in Iran 30

Box 6 Quranic schools 32

Box 7 Radio education in Mongolia 33

Box 8 Teaching the nomads or learning from them?
The 1974–75 Rural Development Campaign in Somalia 36

Box 9 Dynamic ecosystems and local knowledge. From equilibrium to non-equilibrium ecology 51

EXECUTIVE SUMMARY

Nomadic herders number several tens of millions of people, mainly in Africa, the Middle East, and south, south-west and central Asia. They include some of the poorest and most vulnerable of all southern populations. Reaching them with formal schooling has become a major challenge, and millions of nomadic children remain outside the education system.

This review of the literature focuses on the basic education of nomadic pastoralists but also draws on valuable lessons gained from experiences with other nomadic groups world wide. A special section is devoted to a Mongolian case study based on original fieldwork. Mongolia was chosen because of its unmatched success in providing formal education to a largely nomadic population between 1960 and 1990, and because of the sharp drop in enrolment and attendance since liberalisation in 1990–92.

The analysis of the literature suggests the following main points.

1. Most of the education provision as it is conceived, designed and delivered, competes (from a position of power) with the generation, distribution and reproduction of pastoral specialisation, and in so doing creates a threat to the livelihood of the pastoral household, particularly the more vulnerable.

2. Overall, as presently designed and delivered, education undermines pastoral societies' potential for endogenous change – paradoxically, at the very moment in which it presents itself as an instrument of change – by: (a) undermining the young person's sense of identity and belonging to their own ethnic group, their understanding of the pastoral way of life as a life of dignity, and their independence; and (b) contributing to the centre-periphery divide, acting as a major channel for conveying human resources, particularly those who would be crucial in the generation of change, away from the pastoral society and the countryside.

3. Evaluations of the impact of educational policies largely ignore the unintended social, political and economic effects that may result from the policy and its implementation. By narrowing the analysis of the impact of education to measuring only the expected results, particularly when those results are rarely achieved, we deal with a very incomplete and misleading picture.

4. There is a causal link between the culture expressed both within the school environment and within the wider education discourse, and the success of education policies for nomads. Success of education depends more on a context sympathetic to nomadic culture than on the adoption of a particular strategy, methodology or curriculum. This hypothesis finds support in the Mongolia case study.

The few formal (mass) education programmes that have performed with some degree of success are characterised by being:

- delivered within a non-antagonistic cultural environment and relying on a human interface strongly sympathetic to the nomadic culture;

- supported by effective law enforcement;
- free of charge;
- matched by pastoral development policies successful in (a) decreasing labour intensity and (b) freeing children from the household's labour demand;
- provided within an existing local education structure;
- 'planted' into an existing pastoral support ideology.

On the other hand, successful non-formal basic education programmes have the following features:

- are delivered within a non-antagonistic cultural environment and rely on a human interface strongly sympathetic to the nomadic culture;
- are two way processes, that is, are highly flexible in structure and content and maintain such flexibility over time, in order to be able to respond to changing needs;
- the informal settings of the school environment allow parents' close surveillance over physical and moral security of children (especially girls);
- are willing to acknowledge social, economic and political hindrances to pastoral livelihood beyond pastoralists' control, and have the resources to provide skills *specifically* designed to increase that control (e.g. campaigning, lobbying, local advocacy, etc);
- interlace with existing government institutions for education and development.

Overall, the non-formal approach has proved more successful and cheaper to implement. However, as long as non-formal education is not accorded the same status as formal schooling, both in administrative terms and in people's perceptions, its 'success' will ultimately be subject to its capacity to channel out-of-school children into otherwise unsuccessful, unresponsive formal education systems.

Despite their record of educational 'failure', pastoralists are far from being the drifting unskilled under-class they should be according to the popular understanding of illiteracy. On the contrary, they can be very confident, articulate and entrepreneurial, have good negotiating and management skills, and show a strong sense of dignity and self-respect. Their societies usually have long traditions of self-government, with sophisticated institutional structures and exceptionally high levels of social capital. This review suggests that a consideration of this paradox should be at the centre of every programme evaluation as well as of every analysis of the continuous failure, with regard to nomads, of the universal project of education.

To date, as a universal project, education has had a very broad goal (the fulfilment of all individuals as human beings) and a very narrow view (the structure and content of the service). With regard to education of nomads, at least, this attitude should be reversed: there is a need for a broader view and very focused goals. Education policies should expand the view from just statistics and the classroom, to education as a broad phenomenon. This will offer the important advantage of including in the field of vision a whole range of situations and dimensions that appear to influence both the way education is received and its potential for fighting poverty, and which to date have been largely overlooked.

At the same time, education policies should use their broader view in order to identify specific goals with pinpoint accuracy. There seems to be a growing awareness that education is first of all a political issue and that the social and political dimensions of nomads' marginalisation must be recognised. If one of the goals of education is to empower nomads to cope successfully and interact with the new challenges raised by globalisation, as well as enabling them to gain political representation, then mass education is probably too expensive and too slow and may simply not be the best way. Specifically focused training and support may be more effective and much faster.

There is a need to link, more successfully, the practice of education and issues of nomadic pastoral culture and society, particularly the relationship between culture, local knowledge, social institutions and poverty. More effective schooling in this respect means teaching and learning which recognises that the knowledge, skills and attitudes needed for effective herding under pastoral conditions are likely to:

- value pastoral livelihood systems as appropriate and technically adapted to their environment;
- equip pastoralists to adapt in dynamic ways to changes in the pastoral livelihood system resulting from external influences;
- be based in part on indigenous or local expert knowledge;
- be intricately linked to wider features of social organisation and institutions;
- recognise that pastoral children may need to be equipped for life in other livelihood systems, but without assuming that this is the main objective of their schooling.

INTRODUCTION

> 'It is increasingly recognized that nomadism has several important disadvantages, such as extensive and destructive use of natural resources, inefficient use of human resources, and a marked inability to use social services.' *Proceedings of the Khartoum workshop on arid lands management, The United Nations University Press, 1979* http://www.unu.edu/unupress/unupbooks/80044e/80044E08.html[1]

Nomadic herders number several tens of millions of people, mainly in Africa, the Middle East, and south, south-west and central Asia. They include some of the poorest and most vulnerable of all southern populations. Reaching them with formal schooling has become a major challenge, and millions of nomadic pastoral children remain outside the education system. This will continue until more effective ways are found to bridge the gap between what formal education systems now try to teach and what pastoral children need and want to know.

The literature on nomads and education is relatively scarce, disparate and inaccessible. The studies on individual countries or even regions are usually no more than a sparse handful of secondary sources, different in nature and relevance, distant in time from one another and focusing on different areas. The first collection of studies on the topic, the report of the Mogadishu 1978 Seminar on Basic Education for Nomads (UNESCO/UNICEF 1978) is still today an isolated exception. Works resulting from good quality primary research are exceptionally rare. Apart from an early 'explorative' desk-study focussing on Islamic nomadic populations (Diallo 1979), previous overview works dealt with education rather briefly, as an aspect of service provision (Sandford 1978; Swift *et al.* 1990; Bonfiglioli 1992), or focused on particular case studies (Gorham 1978; Nkinyangi 1981; Heron 1983; Närman, 1990). A renewal of interest in the topic has been noticeable at the international level over the last few decades (UNESCO 1989; 1990; UNESCO-BREDA 1997).

This review focuses on nomadic pastoralists, but with attention also to relevant lessons from experiences with other nomadic groups such as hunter-gatherers, mobile fisher people and Gypsies. Geographically it will cover mainly central Asia (especially Mongolia and China), south-west Asia and the Middle East (especially Iran, Jordan and Israel), Africa (especially Kenya, Nigeria, Mali, Mauritania, Ethiopia, Somalia), and Eastern Europe.

The global approach offers the advantage of a variety of experiences and a reasonably large pool of materials on a subject that is little documented. The adoption of a wide angle, however, only partially compensates for the gaps. Indeed, education, and particularly the education of nomads, is such a context specific issue that a global approach often presents just the same problem of information scarcity, but on a larger scale.

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[1] Khogali, M.M. (1979)

A special section of the review is devoted to a Mongolian case study based on original fieldwork. Mongolia has a large number of nomad children in primary schools and as such illustrates a success story, having used boarding schools throughout the country since the 1950s.

PART 1 CURRENT TRAJECTORIES AND MAJOR ISSUES

1 WHY – THE EDUCATIONAL RATIONALE

This section presents the current rationales for providing education to nomads as well as the main objectives at a national level, and articulates them with relevant critical arguments from the broader literature on Pastoralism.

Policies and programmes concerning the education of nomads can be grouped around two major rationales which may work together or against each other: (a) the full accomplishment of the individual as a human being; and (b) the integration of nomadic groups into the wider national context. The ways these rationales are understood, combined and pursued may vary greatly. The first group is centred on a notion of education as a basic need and a fundamental right and puts great emphasis on inclusion and empowerment. The second focuses on the economic and social development of nomads. In this case the main concern is with sedentarisation, modernisation, poverty alleviation, resource management and state building. In the large majority of cases this involves the incorporation of nomads into mainstream society and economy, although there are a few non-formal education projects trying to promote negotiation and articulation rather than incorporation.

1.1 A Basic Need and A Fundamental Right

Basic formal education is seen as essential for the full accomplishment of individuals as human beings, their survival and lifelong development. This position is reaffirmed for example in the first article of the World Declaration on Education for All (1990). As such, education is represented as a fundamental human right.

Although, doubtless, this view offers many advantages, in the specific context of education provision to nomads it also presents some dangers. The first is that by focussing on individuals, it separates children's livelihoods and best interests from those of their households, therefore antagonising the structural organisation of the pastoral economy, the basic unit of which is the household or a group of households,[2] not the individual. This clash between individual-based education strategies and household-based pastoral strategies is a crucial issue that will be treated extensively later on.

Parents' decisions not to enrol their children at school or to withdraw them are usually made keeping in mind the best interest of the household (including the children) in a given context. Representing such a decision out of context, as depriving the children of a fundamental right, can legitimate authoritative interventions by the state well beyond the scope of education, whilst turning attention away from the issue of accountability about the quality and availability of the service.

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[2] In Mongolia, for example, the *khot ail*, or traditional nomadic herding camp, comprises a group of households, often although not always consanguineal or affinal relatives (see Mearns 1993).

Moreover, the emphasis on the universal value of education makes it difficult to recognise the cultural specificity and ideological dimension of all educational practices on the ground. Although equity in the state's provision of services to its citizens is obviously an important goal in principle, often the flags of equity and children's right to education veil more or less deliberate practices of cultural assimilation of minority groups into the hegemonic societies.

During the mid-1960s a group of Alaskan and Canadian researchers studying the conditions of the educational programmes in the circumpolar nations found that although their educational systems had theoretically been organised on principles of democracy and responsiveness to local community needs, existing programmes were designed to accommodate the language, culture, economic system, and interests of the dominant group (Darnell 1972).

Analysing public service provision to Bedouins in Israel, Meir points out how the goal of efficiency may open new avenues to political control of the government over the nomad groups, and how behind the efforts to ensure education provision there may be the intention to 'sever Bedouin from their nomadic way of life, to sedentarise them, and eventually to control their locational patterns' (Meir 1990: 771).

This is also true of the otherwise successful Iranian tent school programme, which to a large extent focused on nation building according to the dominant culture and politics (Shahshahani 1995).

In a recent study on education in Tibet, Catriona Bass (1998) points out that both the Chinese press and academic researchers, and often western educationalists as well, share the view that children of non-Han nationalities, whose primary school enrolment rate is low and drop-out is high, are deprived of their right to education by their parents for economic or religious reasons. However, the context of education provision is one in which the families face high costs with the perspective of very low gain, and the school system is heavily biased towards Han culture and against Tibetan culture and society before the 1950 Chinese occupation.

Similar situations have recently been reported about the Bedouins in the Negev desert (Abu-Saad *et al.* 1998), the pastoralists of Kazakstan (De Young and Nadirbekyzy 1996), Siberia (Habeck 1997), India (Rao 2000), the Roma gypsies in Europe (Csapo 1982; Okely 1997), the Orang Suku Laut fishermen of the Indonesian Riau Archpelago (Lenhart 2000).

Empowerment and inclusion

The satisfaction of basic learning needs is thought to have, as a consequence, the empowerment of individuals. The nature and limits of empowerment within development practices – including education – are the object of critical analysis which is beyond the scope of this study (Shore and Wright 1997; Nelson and Wright 1995; de Koning 1995; Street 1993). With specific reference to nomads, the goal of empowerment – through education or anything else – seems particularly appropriate, given that in almost every country where they are found, they are minorities suffering problems of under-representation, social, economic and geographic marginalisation, incorporation by hegemonic groups. However, in this case as in the previous one, the issue is far from being straightforward.

Particularly within mainstream policies, the notion of empowerment is often adopted in conjunction with a model of basic education that assumes development, individual liberty and social mobility as inherently implied by it (for example in Nigeria: Federal Ministry of Education 1987). Inclusion in formal education is seen as the key for inclusion in development, whatever the meaning given to it. The notion of empowerment is adopted within a circular argument that presents it as an automatic result of the elimination of disempowering illiteracy. A very popular image, either referred to as a goal or an urgent need, is 'to eradicate illiteracy from the country', as if it was an epidemic disease. In this way, the analysis of the causes of the marginalisation of nomads is reduced to a tautology: nomads are disempowered by not being empowered (yet) by education. The social, economic and political dimensions of past and current processes of nomad's disempowerment remaining undisclosed.

The issue of the inclusion of 'educationally disadvantaged' nomad children into national education systems should therefore be considered with attention to the way those systems and relative policies understand: (a) the integration of nomad children within their own household's economy; (b) the causes of their school drop-out or under-enrolment; and (c) the causes of the marginalisation of the nomads at social, economic, and political levels. By failing to do so, inclusion may do more harm than good, resulting in further marginalisation and disempowerment (SCF 2000; Dyer and Choksi 1997a).

1.2 Development and Integration

With rare exceptions, education is seen as an instrument for transforming pastoralists into: (a) settled farmers or waged labourers; (b) 'modern' livestock producers; and/or (c) loyal citizens. Only small-scale non-formal education is sometimes used as part of a wider process directed to articulating the internal dynamics of nomadic society with national and global dynamics. Common to all the education-for-development approaches are accounts of pastoralists' poverty and the assumption that education will bring an improvement of their standard of living.

For about sixty years, from the first experiments in the 1920s to the mid-1980s, at the core of pastoral development theories and practices was the assumption that nomadic pastoralism was an evolutionary *cul de sac*, environmentally destructive, economically irrational and culturally backward (for a recent overview of pastoral development history, see Anderson 1999). The only way pastoralists could be seen to develop was by abandoning pastoralism, the obvious first step onto a higher stage of evolution being sedentarisation. Indeed, even after more than two decades of extensive research accumulating evidence against such tradition from different disciplines (Baxter 1975; Sandford 1983; Scoones 1995; de Bruijn and van Dijk 1995; Pratt *et al.* 1997), myths long ago dismissed within academic research are proving hard to kill off amongst pastoral development policy makers and operators. It is not surprising therefore, to find those myths again and again within the literature reviewed for this study, which is for the most part produced by educationalists, usually without specialist knowledge of pastoralism. Of all the myths, that the first step of pastoral development is sedentarisation seems to be the most resistant.

Education for sedentarisation

The myth of sedentarisation can affect educational policies for nomads either directly or indirectly. Directly, when education is made instrumental to sedentarisation. Indirectly, when pastoralists' problems in relation to education are more or less instrumentally attributed to nomadism and therefore ignored or given a temporary and inadequate response, on the basis that they will simply disappear when the nomads will finally settle.

Nomads are formally categorised according to their stage of sedentarisation in Nigeria's *Blueprint on Nomadic Education* (Federal Ministry of Education 1987). Even in a recent study from a participatory perspective one reads: 'Rural sedentarism in Africa can be discerned as the last stage of the process that occurs over time in the mode of the pastoral production. [...] The three stages towards sedentarisation are nomadic-pastoralism, agro-pastoralism and transhumant-pastoralism' (Woldemichael 1995: 9).

This approach tends to define nomadism in purely negative terms, with reference to what they are not-yet or not-anymore. They are identified as 'farmers of livestock' (Ezeomah 1997), represented as virtually settled people but without a place to stay: 'lack of a home of his own and grazing land for his cattle has forced him to be on the move throughout his life' (Alkali 1991: 56).

There are even debates on the way sedentarisation should occur, whether the process should be accelerated through education provision or rather left to follow its 'natural course', for example the papers of G.V. Ardo, J. Aminu, and H. Alkali, in the collection of studies on *Nomadic Education in Nigeria*, edited by Gidado Tahir (1991), or the critique by Woldemichael (1995) of government-initiated sedentarisation in Eritrea.

Education is supposed to promote sedentarisation in the following ways: by imposing a standard system designed for sedentary people and therefore making it necessary for the nomads to stay near settlements, if they want their children to go to school; by accustoming nomad children to a sedentary lifestyle in boarding schools; by denigrating nomadic culture and inculcating in the children the values and world-views of sedentary society. There is also an expectation that education as such, seen as a way of fully developing the individual, will naturally emancipate nomads so that they wish for a 'more evolved' sedentary lifestyle.

However, historically pastoralism is a specialisation that developed from agriculture (for example, Kazhanov 1984; Sadr 1991), so there is no evolutionary straight line from nomadic livestock keeping to sedentary farming. The problems associated with the sedentarisation of pastoralists have been the object of detailed analysis over the past twenty years (Salzman 1980). Indeed, research on the Western Tibetan plateau, Mongolia and more recently in Rajastan, India, offers evidence that under certain conditions – which do not exclude an interaction with global changes – nomadic pastoralism is actually expanding (Goldstein and Beall 1991; Kavoori 1996; Mearns 1996b). At the same time, recent studies on settled pastoralists contradict received wisdom about the effects of sedentarisation, finding worse nutritional status and health conditions than within nomadic groups (Campbell *et al.* 1999; Baba *et al.*, 1993; 1994).

Attempts to understand pastoralism on the grounds of its degree of mobility are usually misleading. Mobility, is itself a variable. The spectrum from sedentary life to nomadism is better understood as a continuum, each point of which represents a different configuration of livelihood strategies. Pastoralists move across such a spectrum *in all directions* (that is becoming at times more or less mobile) through processes of adjustment to changed life conditions that may last for decades (Toulmin 1983; Bonfiglioli 1988; de Bruijn and van Dijk 1995).

The crucial point here is that, to the extent to which pastoralists are mobile, the attempts to settle them represent a threat to their livelihoods, and are received as such. According to a study by UNICEF on the challenge of implementing the Convention on the Rights of the Children: 'educational programmes for nomads have failed primarily because decision makers have sought to use education as a tool for transforming nomadic populations into sedentary ones' (Dall 1993: 26).

Education for modernisation

Following the shift in the pastoral development paradigm during the 1980s (Baxter 1985; Hogg 1988; for an historical account of this change see Anderson 1999), some countries abandoned, at least formally, the goal of sedentarisation and transformation of pastoralists into farmers, beginning to focus on how to use education in order to improve pastoralism as such. Nomadic pastoralists should receive formal education because, within their respective countries, they control important 'national' resources (land and livestock), the productivity of which should be improved to match national requirements. Education is seen as an instrument to change nomads' attitudes and beliefs, as well as to introduce 'modern' knowledge and 'better' methods and practices. In short: to transform nomadic pastoralists into modern livestock producers.

In Ethiopia, for example formal education is supposed to introduce agents of change within pastoral communities:

> After acquiring knowledge and skills in modern cattle raising and modern farming methods, basic care and nutrition, they will go back to the community where they came from as change agents to improve the living conditions of their people (Degefe and Kidane 1997: 36–37).

Usually a concern for environmental degradation, deterioration of pasture or desertification is associated with a concern for productivity levels. As a result, increased marketing and marketability of livestock are included in education policies and even curricula. In the words of the UNESCO Regional Director for Sub Sahara Africa:

> The problem confronting nomads today is their continuous use of traditional subsistence methods of production to exploit their economic sectors. These methods have failed to meet the challenges of the present economic needs. And cannot, therefore, hope to meet future needs which will be characterised by rapid technological changes (Obanya, Preface to Ezeomah, 1997: ix).

In Tanzania, the Ministry of Education and Culture emphasises the urgency of educating pastoralists on the need to decrease the size of their herds in order to reduce the pressure on the land. The argument goes on to recommend the application of modern methods of animal husbandry, such as the use of better cattle feeds, preparation of fodder and pasture management, with the goal of improving animal products for wider markets (Bugeke 1997: 78).

In Sudan, the education of nomads will supposedly 'enable them to develop a national outlook and relate the good aspects of their cultural heritage, to fulfil their civic duties, to gain their rights and privileges, and to increase their productivity' (Suleman and Khier 1997).

One of the oldest and certainly the most spectacular example of metamorphosis of the sedentarisation paradigm is found in Nigeria. As summarised in Aminu (1991: 51, *author's italics*): 'nomadic education programme [...] is intended to enable the nomadic population to improve upon their productivity, especially given that *they* exercise a dominant control of the protein sector of *our* national nutrition'.

As early as 1982, in order to win over the resistance of the supporters of sedentarisation-first-of-all, the promoters of nomadic education argued that settlement is the 'natural evolution' of nomadism, and therefore not an issue; whilst forcing nomads to settle 'before time' would mean the collapse of their culture and system of production, and the consequent loss of their potential contribution to the national economy. On the other hand, they emphasised that although sedentarisation does not have to be a precondition of pastoralists' integration into the market economy at the national level, the immediate provision of education could guide and accelerate such a process (Ezeomah 1982; Federal Ministry of Education 1987).

Despite the shift away from the emphasis on sedentarisation, education continues to be intended as an instrument for the transformation of pastoral society, although this time 'from within', in order to modernise pastoralists 'without uprooting their culture' (Ezeomah 1983). However, the attention given to indigenous culture reduces it in practice to a stock of 'essential elements' identified with the help of consultations with the nomads but ultimately chosen by experts (educationalists), to be blended or incorporated into the nomadic education curriculum with the explicit intent of making state education more appealing to the nomads (Salia-Bao 1982; Lar 1991a; 1991b). A discussion of the programme during a recent UNESCO funded international seminar on the education of nomadic populations in Africa, delivered by the former Executive Secretary of National Commission for Nomadic Education, maintains substantially the same perspective.

According to one of the very few non-Nigerian scholars who discus the nomadic education programme: 'in its present form, [the programme] may be viewed as not much more than the Nigerian government's attempt to incorporate the "nomads" into the "modern society" by enrolling them in school' (VerEecke 1991: 14). A paper presented at the Osaka Symposium on Fulbe Identity in 1989, reports the following comment by a Nigerian pastoralist about Nomadic Education: 'This programme is an embarrassment to us all, the only people benefiting from it are in the Ministry of Education' (VerEecke 1993: 155).

The many claims about the beneficial effects of education on pastoral productivity are not supported by evidence. Indeed, very little research has been carried out on the subject and the few data available appear to disprove the argument rather than support it. Mongolia, where the achievement of nearly universal primary education among herders in the 1960s–1980s was accompanied by some increase in livestock productivity, offers only limited support to this thesis. The enhancement in productivity was disappointing in light of the investments sustained, and there is evidence that one of the major constraints was labour shortage, probably made more acute by the compulsory education of children from eight to 18 years of age (Mearns 1991; 1993).[3] On the other hand, among the Maasai of Kenya, who have increasingly turned to school education during the last twenty years (Sarone 1986), education does not affect livestock production, which is being taken over by young non-educated wealthy cattle traders who buy the labour of young non-educated stockless herders (Holland 1996).

Moreover, a crucial assumption in all the approaches emphasising the role of education in increasing productivity is that it is possible to separate pastoralism as a way of life from pastoralism as a way of production, abandoning the first in order to modernise the second. This perspective assumes that the individuals will be 'emancipated' through education from their traditional way of life as pastoralists, but will maintain the same productive role as herders. However, in practice this hasn't proved to be the case.

The reduction of pastoralism to a system of production didn't work when it was first theorised and experimented by the Soviet Committee of the North, in Siberia in the 1930s, on the Tungus (Evenki) reindeer nomadic pastoralists. As a consequence of forced collectivisation of livestock and division of labour, only the people in hunting and herding brigades were to work away from the settlements, with one woman each as housekeeper. But rather than staying in the settlements many women followed their husbands taking with them those children who didn't have to stay in boarding schools (Habeck 1997).

Another example is the case presented by Caroline Dyer and Archana Choksi on their non-formal literacy experiment amongst the transhumant camel herding Rabaris of Kutch, in West India. The Rabaris appeared uncomfortable with an approach to education aiming to equip them with skills meant to increase their chances of modernising the livestock industry. To the extent to which they couldn't see a future for their own way of life, they showed no interest in modernising it. Instead, they seemed to be rather more inclined to give up with pastoralism altogether. Consequently, they valued formal schooling for their children, independently from its quality and ideology, more than the effective learning of new skills for their day-to day life, only formal education being seen as a symbol of modernisation and the route to a higher social status (Dyer and Choksi 1998).

Anthropologists have pointed out how pastoralism is a mode of perception as well as a mode of production (Baxter 1990). An awareness of the non-viability of pastoral livelihood strategies in the face of shrinking resources and lowering social status appears to trigger in pastoralists a concern for their own existence and cultural identity rather than an economic concern about the necessity of modernising their production methods. The responses sought to such a concern may have more to do with spirituality than economics. El-Hassan (1996) gives a description of Hamoshkoraib, a settlement with educational facilities to the north of Kassala, Sudan, along the border with Eritrea. Hamoshkoraib is the headquarter of Ali

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[3] See Part 2 in this study.

Bitali's Islamic movement started in the 1950s amongst the Beja pastoralists, and funded on a core of interdependent principles which include the abandonment of nomadism, self reliance and pursuance of cultivation and trade. With the current state's religious policy, the male and in theory the female graduates of Hamoshkoraib have access to institutions of higher education at the national level. The movement is propagating to eastern regions and other parts of Sudan, and is attracting followers and students from as far as Mali, Nigeria, Eritrea, Somalia and Yemen.

Box 1 Education for assimilation or for adaptation?

European education under the colonial administration, both in British and French colonies, had the main goal of creating a political and professional elite that would be identified as closely as possible with the culture of the city. Schools were highly selective, and based on the concepts of individual and academic achievement. Primary schools were preparatory institutions for secondary schools, geared academically to the colonizer's public tradition. The ultimate result of education was cultural assimilation (Sifuna 1982).

Within the British context, however, this approach was questioned in the early 1900s, following an analysis of the educational policy in India in the light of the political turmoil at that time. The key critical argument was that the provision of an elitist and academic education in English 'spread disaffection and subversive ideas and would lead in the future to the training of a body of agitators'. Such a kind of education, 'produced individuals divorced from their social milieu, no longer prepared to engage in traditional occupations and even holding a contempt for manual labour' (Hetherington 1978: 118). The critics of assimilationism, instead, recommended mass education at the local level in the vernacular language, centred on religious and moral teaching and closely related to the environment. According to Frederick Lugard, who shared these views, primary education for natives in rural areas should focus on practical subjects, such as carpentry, blacksmithing and farming, and on the use of examples from the local environment, including just enough literacy to enable people to understand Government policies and the procedure of Native Courts (Ayandele 1979). Indeed, Brown (1975) describes the concept of adaptation as the educational analogue of 'indirect rule'. In 1925, a colonial office Memorandum on educational policy in Tropical Africa emphasised the importance of preserving African society through its adaptation to the modern world, bringing about change without uprooting tradition (Sifuna 1982). The opposition between assimilation and adaptation was still at the base of what Julian Huxley, the English biologist who became first director of UNESCO, echoing Lugard, called 'the dual mandate of education; ... education should be adapted to the local environment of time and place, and yet give the opportunity of transcending that environment' (Huxley 1932: 304).

Despite the official rhetoric on the adaptationist approach, the British educational apparatus within the wider colonial system found it difficult to 'adapt', and continued to maintain school practices which were largely geared towards assimilation. On the other hand, the rural people themselves tended to see European education as a means of social and economic advance and often rejected adaptationist schools as an instrument of exclusion (Sifuna 1982).

The issues raised with regard to the education of the rural natives in the colonies, have been inherited by the independent governments together with the education systems, and have enjoyed recent revivals in the way the current issue of providing education to nomads – today's 'natives' in their own countries – is understood and represented.

A recent paper on the need for introducing awareness of pastoralists' knowledge and perspectives into the curriculum of veterinary medicine, warns against the limits of using a productivity-focused approach within contexts in which livestock is not seen as a mere factor of production, but rather underlies people's cultural identity, is loaded with ritual and religious meanings and can play key roles in the construction of social capital (Köhler-Rollefson and Bräunig 1999a).

Finally, all the approaches that see education as a way to increase productivity, or as a humanitarian goal, fail to consider that increased productivity does not necessarily mean more income for producers, as this is subject to pre-existing relations of exploitation (Kavoori 1996).

Poverty and impoverishment

Formal education is supposed to equip nomads against impoverishment and, ultimately, to eradicate poverty by opening access to alternative livelihood options. However, high levels of social differentiation within pastoral groups and the changing patterns of pastoralists' own experience of poverty and prosperity require the definition of poverty to be much more specific (Baxter and Hogg 1990; Anderson and Broch-Due 1999). Moreover, within the literature the role of education in eliminating nomadic poverty is constantly assumed, but no evidence is ever given.

Pastoralists are not automatically the poorest of rural people. Pastoralism is a specialisation developed from mixed farming, not the result of a process of farmers' impoverishment. Impoverished pastoralists may go back to farming or become hunters, gatherers, workers, servants, watchmen, food-aid dependants or bandits, but whilst destitution from pastoralism is common, return to pastoralism can be more difficult, depending on factors such as the availability of initial capital, as well as pasture and water resources. Education narratives often 'deduce' pastoralists' poverty from characteristics such as the lack of permanent housing and mobility, or the use of child labour, that are simply part of their life-style and economic organisation.

For example, a recent report on a Participatory Education Workshop in Kotido district, Uganda, stresses pastoralists' poverty using the following arguments: 'A man owning 1,000 heads of cattle, for instance, is still sleeping on hides, wearing a sheet only or a jacket with a sheet wrapped around his waist, or even a jacket with the rest of the body parts below naked. He eats out of a calabash, cannot pay school fees, taxes or hospital bills' (Owiny 1998: 11).

With regard to the role of education in eliminating poverty, the only research in this direction identified during the review is that carried out by Holland (1992) among two groups of Kenya Maasai. Holland finds that education is not a precondition for employment. On the contrary, the increasing commoditisation of cattle and labour is generating new jobs especially for the non-educated (cattle trading, waged herders). At the same time, the flow of in-migrants from non-pastoral districts, where formal education is more established, makes competition for employment that requires literacy particularly hard for youths from pastoral groups.

Modern education is supposed to 'equip [nomad] children to earn outside the community they were born into' (SCF 2000). The background rationale of this policy is described plainly by Sandford (1978): the combination of development-induced population growth and a process of resource shrinking, are making pastoralism unsustainable for an increasing number of households; education is meant to enable income differentiation by qualifying the youth for employment outside the pastoral economy. However, the same narrative also predicts that modern education will generate further development. It is not clear therefore how education could actually improve the situation as, following the narrative, further development causes further population growth and consequently further shrinkage of pastoral resources, forcing more people to need education in order to search for a different livelihood, that is feeding a vicious circle in which what is presented as the initial problem is just made more and more acute.

Box 2 Education for development or development for education? The educational policy in Kenya during the 1980s

Following the 1961 Addis Ababa Conference of African States on the Development of Education in Africa, the new policy focus was on the expansion of the education system. The geographical disparity in education provision between pastoral districts and the rest of the country, previously ignored, became a key issue during the propaganda of the 1969 elections (Sifuna 1987). This was closely related to the attention given to pastoral districts by development policy makers in the late 1960s: 'pastoral regions, previously viewed as little more than an economic liability, began to be considered in terms of the positive contribution they could make to bolstering the young nation's economy' (Evangelou 1984: 45).

With the 1970–74 Development Plan, the Parliament amended the Anglo-Maasai agreement, which kept the Reserves closed to non-Maasai, and launched the Remote Areas Boarding Programme (RABP), aimed at improving enrolment rate by offering low-cost boarding schools. At the opening of the districts however, the local educational facilities were flooded by pupils from non-pastoral ethnic groups. In 1973, the abolition of primary school tuition fees throughout the republic caused a dramatic 60 per cent increase of enrolment (Indire 1982), but nomads' response to the RABP continued to be low. In the 1974–78 Development Plan, the evaluation of the RABP found boarding schools being disregarded by pastoralists and operating below capacity. This was interpreted as a sign of non-collaboration and the government decided to cut funds to the programme 'until its effectiveness has been demonstrated' (Government of Kenya 1974 in Nkinyangi 1981: 188).

Why did pastoralists appear to respond to education opportunities so differently from the rest of the country? Some analysts argued that carrying out educational promotion in the absence of economic development and related social services had been a mistake (Gorham 1978; Nkinyangi 1981). Nomads' low participation was to be understood in a broader historic and socio-economic context. Demand for education requires a set of social and economic preconditions, such as integration into the national economy and well-established relationships with the wider society (Heron 1983).

These ideas were embodied in the 1984–88 Development Plan. This concentrated on the development of livestock resources, marketing facilities, and banking services, treating the promotion of primary school enrolment as an indirect effect of increased monetary resources among pastoralists (Ponsi 1988). The new paradigm had swapped the cause with the effect. If education as a way to bring about development didn't work, then certainly development would work as a way to bring about education.

Additional knowledge or trade-off

It is a leading conviction of global policy direction on education, that modern education should be for all. Basic education in particular, in each country, is not actually just an opportunity for those children or households who want it or need it as they have little chance to make a livelihood within the pastoral economy. Formal education is everybody's obligation during school age, independently from considerations about the present or future viability of households' livelihood strategies or need for economic differentiation. Schooling is seen as a drug that should be administered to everybody even if only some actually need it.

Whatever is learned throughout formal education is seen as a bonus, a better-than-nothing, an opportunity to learn which is additional rather than alternative to the knowledge or skills of out of school children. At the extreme of this position, pastoral expertise is seen as somehow 'natural' to pastoralists rather than learned: a given. The ex-Nigerian Minister of Education, Aliu B. Fafunwa, writes that one of the objectives of nomadic education is 'the improvement of their *innate* pastoral skills' (Fafunwa, *Foreword* to Tahir 1991: v, *author's italics*). The widespread middle ground approach assumes that whatever a child can learn out of school can be learned faster and better within a formal education programme, with the improvement of problem solving skills and even work performance.

This position has become controversial, particularly over the last decade following the renewed attention to indigenous knowledge within rural development analysis (Scoones and Thompson 1994). Several authors argue that what is learned at school is not additional to, nor substitutive of pastoral expertise, and see schooling as a trade-off between the gain of new opportunities of income generation outside of the pastoral economy and the loss of opportunities of specialisation within the pastoral context (Semali 1994; Dyer and Choksi 1997b).

Indeed, education does not offer any guarantee of improving work performance even when it takes place within optimal conditions. During a programme for out-of-school children in Turkana, Kenya, the head teachers of the schools involved were given special training. The training was designed for the programme, donor funded and supposedly of good quality, but by itself didn't seem to generate any improvement in work performance despite the participants being highly educated. The report on the programme notices laconically that 'few head teachers appeared to make good use of the knowledge gained through [the] training in managing their schools…' The exception to this were schools which could rely on good relationships with both local civic society organisations and the communities, that is on the 'traditional' social network of teachers and headmaster (MOEST 1999: 22).

To date, virtually no research has focused on the nature of the relationship between formal education and traditional pastoral knowledge, apart from an isolated study amongst Maasai school-boys and non-schooled boys, on cognitive processes associated with herd management.[4] Having found that non-schooled boys could perform much more complex classifications and identifications of cattle (from their fathers' herds) than school-boys, the author argues that to remove children from the context of direct learning and the indirect experience of the pastoral domain does affect their cognitive processes, both in terms of content and organisation (Galaty 1986).

Literacy and information

Consistent to an understanding of education as additional to existing knowledge is the other common conviction that literacy represents an extraordinary opportunity of expanding knowledge by giving access to the immense wealth of written information. Apart from the technical obstacles (availability and local accessibility of written information in the languages one masters), this conviction reposes on the assumption that written knowledge can simply pile up on oral knowledge, that is that all knowledge is of the same 'kind' independently from the way it is produced or transmitted. However, experience shows that knowledge is tied to social structures and far from being universally commensurable. Where knowledge comes from and how it is produced is crucial to its status as knowledge. Even in literate societies, about delicate matters such as health or tax paying, ordinary people often prefer to ask a friend or somebody 'acknowledgeable' rather than learning from written sources. Within predominantly oral cultures this attitude is likely to be stronger. For example, work on drought early warning systems points out how supposedly 'robust' information such as government weekly bulletins on the availability of pasture in specific areas, based on satellite images, are disregarded by the herders in favour of less precise but 'more reliable' word of mouth (Buchanan-Smith and Davies 1995). Works amongst various ethnic groups have demonstrated how the relationship between literacy and oral tradition is far from mechanic and straight forward, but rather one in which the opportunities made available by the new situation are always selectively adapted to traditional needs and contextual interests (Lewis 1968; Bloch 1993).

Education for state building

Pastoralists are usually isolated minorities living in territories remote from central government, difficult to control and often across insecure international borders. Living in these conditions, nomadic people have a long tradition of autonomy and self-government that is often perceived by central governments as a challenge to their authority and a threat to national order (Danner and El-Rashidi 1998; Hogg 1997). For these reasons the provision of education is often seen as a good opportunity for state propaganda aimed at building social unity beyond ethnic differences and traditional enmities, or gaining political loyalty (Shahshahani 1995). The understanding of literacy (in a shared language) as a crucial source for national identity has been questioned on the basis of the Somali experience, where literacy appears to be 'more an expression and instrument of national consciousness than its source' (Lewis 1993: 143).

Non-formal education

Under the push for de-centralisation and cost-sharing in education over the last ten years some governments have turned to innovative partnerships and collaboration with international development agencies. A few non-formal education programmes are focussing on providing a service enhancing the life and survival of pastoral societies as such, rather than trying to transform pastoralists into something else.

The backbone of these alternative programmes is the concept of responsiveness. Education provision is understood as a two way process responding to situations on the ground through continuous interaction with the recipients. The core feature of the programmes is not, therefore, detailed preparation but flexible and dynamic organisation. These programmes recognise that current education systems are by en large unresponsive to the needs and living conditions of children from marginal or disadvantaged communities, as well as to their changing contexts and to the potential of existing community resources for the educational process. Consequently, one main concern together with providing immediate responsive services, is to try to move formal systems towards more responsive structures:

> Nothing can be gained by trying to get more children to school unless those schools can be improved to the point of usefulness; and one essential mechanism for doing this is to involve children, parents, teachers, communities, and government officials in processes which will shift schooling in a more responsive direction (SCF 2000: 15).

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[1] The old comparative study of herding boys and school-boys by Whiting and Whiting (1968) has a dated socio-psychology perspective and offers no insight into this issue.

Moving away from the 'technical' focus on production makes room for broad livelihood issues such as resource access, conflict management, political action, communication between the literate and non-literate within the community as well as between local and scientific knowledge. Interaction with recipients raises the awareness that knowledge does not necessarily have to pass through literacy, and provides pressure for taking consequent action. It also helps to understand pastoralists within the context of local and national power relations (ARED & CERFLA 1998).

Box 3 The Out-of-School Programme (OOS) in Samburu district, Kenya

The programme started in 1992, with one learning centre using the facilities of a primary school. From the outset it enjoyed the support of religious organisations, international NGOs as well as that of the Department of Adult Education and several other Kenyan institutions, including the local government. The aim of the programme was to offer non-formal primary education to out-of-school children, targeting the 6–16 age group. In 1999 the learning centres numbered 13, six of which had just been opened, with some 700 learners enrolled, 62 per cent of whom were girls. Sometimes the OOS centres are combined with a Functional Adult Literacy (FAL) programme.

The individual OOS centres rely mainly on volunteer teachers and the support of the communities. There is no uniform curriculum, with the choice to follow the standard curriculum or not, depending on the resources available as well as the age and needs of the learners. Teaching focuses on core subjects like Maths, English, Kiswahili and Business Education. In certain cases Animal Husbandry has been introduced, but to a lesser extent. Despite the initial target, those enrolled in each centre constitute multi-grade classes spanning from 10 to 20 years of age, posing a serious challenge for the virtually untrained teachers working with very limited resources. Attendance is erratic during the dry season and particularly in times of drought and famine, but more regular in times of rain. Irregular attendance often creates the necessity to repeat lessons, slowing down the overall learning pace. The programme has acted as a catalyst for children to transfer to the formal system.

Overall the programme is considered to be a success. Particularly, the centres are seen as an acceptable opportunity by young teenagers who otherwise feel too old to join younger children in the formal system. The non-formal school environment, which allows for a higher degree of parental involvement, seems also to respond well to the problems usually associated with girls' education. The girls often come to the centres accompanied by their mothers, who may hang around in order to keep an eye on what they are taught and to ensure that it does not interfere with cultural norms. Factors crucial to this success appear to have been: (a) a flexible timetable (afternoon and evenings) to accommodate childrens' commitment to work; (b) flexible entry age (6 to 21+ despite the original target); and (c) the direct support from the communities that take care of managing the centres. An advantage also comes from the fact that some centres share existing facilities with formal schools. [From MOEST 1999].

Although this new perspective represents a much needed and extremely important change, the non-formal education programmes are usually of a small scale and have little impact in national terms. Moreover, to the extent to which formal schooling continues to be the only route to education-related symbolic values and to higher education, non-formal education programmes will have to come to terms with it. No matter how divergent in principles and goals from mainstream education ideology and practices, if non-formal programmes don't want to become educational gettoes for the poor, they are forced to present themselves as back-doors into the formal education system, therefore compromising enough to be ultimately functional to mainstream education.

The ABEK Curriculum (Alternative Basic Education for Karamoja) used in northern Uganda is meant to 'develop [in the Karimojong children] a desire to join the formal schooling' (Owiny 1999: 7).

Similarly in Ethiopia, the founders' description of the Afar Nomadic Literacy Program started in 1997 says that it 'provides a bridge to more formal mainstream education' (CAA 2000).

On the other hand, the mere creation of alternative approaches is not always a sign of awareness of the structural inadequacy of educational systems. On the contrary, it often appears to result from the assumption that *the beneficiaries* are inadequate and therefore, in order to fit in the system, need first to be 'hooked' and undergo a process of normalisation. Many alternative approaches are not 'responsive schooling' but parallel low quality courses.

From within the formal system non-formal education is often seen as second class education (sometimes even by the organisations providing it), as noticed for example in a recent memorandum on community education by Action Aid (CEI-AA 1999). During a recent survey on the state of education provision in northern Kenya, many teachers responding to a questionnaire on the meanings of newly introduced concepts in educational practices said that 'alternative approaches [are] those methods you use after children have failed' (MOEST 1999: 33).

This is not to say that alternative approaches as such (for example learning centres) are not useful. But it is important to be aware of the structural tension between formal and non-formal settings with regard to the status of the education delivered, a tension that is likely to hold back or undermine initiatives and ideas that are otherwise potentially fruitful and innovative. Unless the issue of status behind the formal/non-formal conceptual divide is addressed, even the most responsive education programmes may, in practice, only channel out-of-school children back into unresponsive systems.

The issues presented in this chapter are summarised in the table below.

Table 1

Rationale	Key arguments	Untested assumptions	Problems
Individual development	- e. is a fundamental right - e. is a means of empowerment	- e. in practice is equal to e. in theory - out-of-school children are neglected children - individual livelihood is separated from household livelihood - disempowerment is an individual problem which can be fixed at the individual level - disempowerment is caused by lack of education and will disappear with education - inclusion into formal e. is always a benefit	- conflict of interest with pastoral economy - legitimates authoritative policies and increases the state's control - legitimates cultural assimilation of minorities in the name of children's rights - hides the ideological dimension of education in practice - hinders the analysis of e. systems on the ground - hides the social dimension of disempowerment and misses its real causes - hinders the understanding of the causes of school
Nomads' development	- e. should trigger sedentarisation - e. should trigger modernisation - e. should generate national political unity - e. should enhance life and survival	- e. is a tool for transformation - nomadism is a stage towards sedentarisation - e. will diminish poverty - e. will increase productivity - educated pastoralists will 'emancipate' from their traditional way of life and modernise, but maintain their role as livestock producers - formal e. is additional not alternative to traditional development of pastoral expertise	- hinders the understanding of nomads' actual educational needs and problems - uses a simplistic representation of pastoral poverty - antagonises pastoral livelihood in the name of livestock productivity - legitimises cultural assimilation in the name of development - educated pastoralists cease to be interested in herding - e. may be antagonistic to traditional learning

e. = education

Rationales and objectives influence the way in which the issue of education provision to nomads is understood and represented within policies, as well as the way solutions for implementation are devised. This is discussed in the next chapter.

2 HOW – THE EDUCATIONAL ENCOUNTER

This section is concerned with the ways in which the issue of providing education to nomads is understood within the literature, and with the strategies used. Mainstream 'problems' and 'solutions' are discussed in the light of anthropological research as well as pastoralists' own arguments as they emerge in the growing number of responsive and participatory programmes. The issues have been collected under the two headings of 'practical' and 'cultural' purely for organisational reasons. Child labour has been listed amongst the cultural issues because it is usually presented as the consequence of a cultural practice (the pastoral way of life), whilst its very practical reason, that pastoral risk-avoidance herd management strategies are labour intensive, is more rarely acknowledged.

Mainstream explanations for the failure of education provision in pastoral areas – particularly low school enrolment and high drop-out rates – usually blame the recipients. The nomadic life-style, in particular the high degree of mobility and the scattered, low density distribution of pastoral populations make education provision to pastoralists expensive and difficult to organise and manage. When, from the point of view of the service provider, a special effort is made, building extra schools in remote areas or equipping existing schools with boarding facilities, the persistently low response from the targeted recipients is explained as caused by pastoralists' cultural conservatism and resistance to change, the uneducated condition of the parents (supposed to prevent them from understanding the value of education), and the habit of using child labour within the household economy.

That nomads show very little interest in formal education, keep their children out of school or withdraw them after the first two to three years, particularly the girls, is a common argument. So common, that often the issue of education provision to nomadic groups is framed as a matter of *persuading* them to use the service. In response to this representation of the problem, governments and policy makers have focused on education propaganda and the introduction of specifically tailored curricula designed to be more appealing to pastoralists.

Less mainstream perspectives highlight pastoralists' difficulty in using formal education as currently provided – in terms of distance, costs, security, etc. – and underline that in those cases in which the service was made accessible, pastoralists have often responded with enthusiasm.

2.1 Practical Problems (and Solutions)

Mobility, sparse population, harsh environmental conditions and remoteness are clearly technical obstacles to the provision of formal education through systems that are designed for sedentary people in well-connected and densely populated areas. However, with rare exceptions, the problem is represented as created by the nomads with their obsolete way of life rather than by the incapacity of a national system to respond to the living conditions of significant numbers of citizens. Representations of nomadism as a stage towards sedentarisation are used to dismiss the problems of nomads as only temporary ones due to a way of life which is not going to last. Governments respond to mobility, sparse population and remoteness by introducing various alternatives to the standard education structure. The most common to date have been boarding schools, but there are a few examples of mobile schools and distance education using radio broadcasts.

Mobility and boarding schools

With regard to boarding schools, neither parents nor children like being separated for long periods, usually with no way of communicating. The parents don't like the idea of giving custody of their sons and daughters to people they don't know, to whom they are not related and whose moral integrity they often doubt (SCF 2000; MOEST 1999). Very similar concerns are shown by Romany and Irish traveller parents in Britain, 'worried that their offspring will learn to take drugs, swear and hear about sex from young house-dwellers' (Kenrick 1998:2). The success of boarding schools therefore depends on the quality of life within the school, first of all on the capacity to recreate a familiar and friendly environment, and secondly on effective law enforcement.

On the other hand, the evidence suggests that strict law enforcement by itself does not guarantee success. In Niger in the 1980s for example, the government used a hard hand on Fulani pastoralists to force them to obey the law on compulsory education. Army patrols were used to bring children of school age to boarding schools by force. However the children often tried to escape, to the point that incidents involving fugitive children were not uncommon (Jeremy Swift, personal communication).

Box 4 Boarding schools in Mongolia

Compulsory state education for every child aged between 8 and 18 years began in Mongolia in 1940, with the majority of the population being nomadic pastoralists. The system relied on hundreds of schools with dormitory facilities, built in all the settlements including the small rural centres. Education was entirely free, with more than 15 per cent of GDP invested in it. Within the following 20 years, Mongolia passed from just about 2 per cent to more than 90 per cent basic literacy. By 1990, before liberalisation, the country had almost reached 100 per cent of literacy.

The system had a standard curriculum, teacher-centred and highly academic. From September to early June, apart from one month of holiday in the winter, school age children from nomad households lived in the rural centres, either staying with relatives or lodging in the school dormitory. Schools were well staffed with highly motivated and comparatively well paid teachers, most of whom came from a nomadic background and had close relatives amongst the nomads. Life in the dormitories is described as happy, despite the homesickness, thanks to the warm and familiar environment created by the staff. Indeed, there seems to have been no antagonism between the school culture and nomadic culture. To the extent to which the formal curriculum reflected an urban, sedentary way of life, the sympathetic human interface neutralised the potentially negative implications (Demberel and Penn 2000).

Living standards in boarding schools in pastoral areas are often very low. School teachers are rarely from a pastoral background (Mongolia is an exception to this). In some countries, schools in pastoral districts may have a majority of non-pastoral children since they may be subsidised or easier to get into than schools in other areas. As a result the prevailing school culture may be anti-pastoralist despite the surroundings (Habeck 1997: about Siberia; UNDP-Emergency Unit for Ethiopia, 1996; Närman 1990: about Kenya; Rybinski, 1980; and Bensalah 1987: about Algeria).

Boarding schools are currently discussed in Tibet as the solution to the high rate of drop-out amongst their very sparse population (Bass 1998). In Qinghai Province, Central China, a project of basic education provides additional boarding schools in very remote areas using permanent tent camps (CiC 2000).

Remoteness and self-sufficient schools

School self-sufficiency has a long history in remote pastoral areas. Usually self-sufficiency was pursued by farming the fields around the school using children's labour. As learning to become settled farmers was considered an important part of pastoralists' development, the use of child labour for farming was not seen as contradictory to the educational mission of the school (Sifuna 1987). A few recent experiments in school self-sufficiency have been based on animal husbandry rather than farming. The new tent-boarding school at YakCho, in the Qinghai Province, China, has a herd of yaks (one per child) provided by the families. That ensures the main ingredients of the local traditional diet, although 'in order to make the school completely self-sustaining' the project is going to construct an agricultural poly-tunnel at the school site (CiC 2000: 4). Similarly, the School Camel Programme in Samburu, Kenya, establishes herds of ten camels three of which provided by the families) in selected schools and, for each school trains the school committee a few girls and boys and one teacher in camel husbandry. The camels are used as practical learning aids (MOEST 1999).

Box 5 Tent schools in Iran

Tent schools were introduced in Iran (then Persia) as part of the Tribal Education Programme, founded in 1955 by a young 'tribesman' with a degree in law, with the financial support of the United States under the Point Four framework. After a difficult start, the programme enjoyed strong financial support from both the United States and the Persian government and grew quickly. The programme was presented as a genuine commitment to bring education to the tribes, and a radical change of direction from the previous attempts to sedentarise them (under Reza Shah); but it was also conceived as a way to consolidate the control of the young shah 'over a divided and rebellious country' (Barker 1981). The founder himself described the tribes as 'an uncorrupted human resource sorely needed for the up-building of Persia' and saw education as an ideal instrument to transform them into loyal citizens (Hendershot 1965: 6).

Hundreds of tribal schools were built in the settlements and tent schools were introduced to cater for small groups of mobile households. The equipment of tent schools was kept to the minimum, with just one blackboard, one case of equipment for science and nature study and the teachers' and pupils' books. A training centre for tribal school teachers was opened as early as 1957, following the failure to substitute the first group of virtually untrained local teachers with well qualified city teachers. For the first decade only primary education was provided at various grades; secondary education was introduced in 1968. In 1973 there were almost 50,000 pupils enrolled in tribal schools (90 per cent boys), about 20 per cent of whom attended the more than 600 tent schools. At its peak, the programme reached about 10 per cent of the school age children.

The standard national curriculum was adopted, but in tribal schools the methodology was very different: there was no corporal punishment and no regimentation, and the timetable (eight and a half hours of lessons per day) was more than two hours longer than in existing schools. Although teaching was in Persian, a foreign language for many of the tribes, pupils could read and write within a few months (Varlet and Massoumian 1975). Indeed, all the observers notice how the nomad children learned surprisingly quickly and appeared exceptionally outspoken and willing to participate in lessons, and: 'when the children pass to the city schools, they almost invariably excel their city cousins' (Hendershot 1965: 20).

Recent analysis of the Tribal Education Programme underlines its political agenda, both from the Persian government (consolidating the power over tribes in turmoil) and the United States (preventing the potential spread of communist ideology amongst the tribes and ensuring access to Persia's oil reserves). The author argues that the alternative methodology used in tribal schools had a manipulative function, ultimately aimed at incorporating and controlling the sources of tribal identity, strength and feelings of superiority, whilst appearing to support them (Shahshahani 1995). Although this critique doesn't deny the 'success' of the programme amongst the pastoral nomads, it does raise, once again, serious concerns about the manipulative use of nomadic education and the difficulty of defining unambiguous criteria for identifying the success of a programme.

Nomadism and mobile schools

Tent-schools, schools-on-wheels and various kinds of collapsible schools have been experimented with over the past 50 years, for example in Mauritania (Oul Mahand 1956), Algeria (Blanguernon 1954; Gast 1954; Rybinski 1981), Iran (Hendershot 1965; Varlet and Massoumian 1975), and Nigeria (Udoh 1982). With the exception of Iran, mobile schools have performed far below expectations. In Nigeria, for example, after almost 20 years since the first attempts were made, today the 'mobile school system is sparingly used due to the enormity of problems that are associated with the model' (Tahir 1997: 56). Tents are also used as semi-stable structures that are moved seasonally or that simply *can* be moved at low cost if necessary (for example CiC 2000).

A recent successful mobile pre-school education project in Mongolia uses *gers* (the white tents of the nomads) or even cars as mobile training centres during the summer. The costs for the structures are low and can be afforded by local governments or the families involved. Teachers are also nomads, they move with their families and stock, together with the group of households involved in pre-school education and are paid by the government for their work as teachers (MOSTEC 2000; SCF 2000b).

To date, the most successful way of providing mobile education has been by supporting and expanding the existing Quranic schools (*duksi*), where they are available. In the Rural Development Campaign in 1974–75, the Somalian revolutionary government enrolled thousands of students from secondary schools as volunteer teachers. They mainly used Quranic school methods for teaching basic literacy in Somali script (Osman 1978). However, as pointed out about Somalia, the success and sustainability of Quranic schools is linked to (a) the religious rationale for teaching, which means that teachers work for free, to please God; and (b) a teaching practice that needs a wooden slate as the only resource. The introduction of secular subjects, on the other hand, requires (a) text books and didactic materials from outside the pastoral context; and (b) extra training for the teachers, which will make them more marketable. In the long term these factors may change Quranic schools, making (even) them less accessible to nomadic groups (Bennaars *et al.* 1996).

Moreover, the Quranic teachers may simply be unwilling to teach secular subjects. Islam, particularly in areas where the Sufistic tradition is prevalent, puts much emphasis on the spiritual value of education *per se*, as a way to be closer to God. Attempts to introduce 'functional' education into Quranic schools may therefore clash with the 'non-functional' nature of Quranic education.

Schools and cash

In order to send children to school, a household must renounce their labour, with all the economic consequences that this involves. Moreover, school tax and boarding contribution in the case of shared cost-systems (as for example in Kenya or, until last year, Mongolia), together with the cost of books and uniforms, often places an unbearable burden on poor families in cash-scarce areas.

During the recent Participatory Living Standard Assessment (PLSA) in Mongolia, the cost of education emerged as one of the key shocks/stresses for a sample of over 180 households across a range of different 'well-being' categories. It also emerged as a main 'trigger' of impoverishment, either directly or as a factor preventing households from improving their asset position, at least in the short run (World Bank 2000).

Box 6 Quranic schools

In Islamic regions, remote areas barely reached by formal schooling nevertheless usually enjoy a capillary system of Quranic schools. As early as 1957, literacy projects with nomads in Somalia found that the majority of the participants (adults) already knew how to read Arabic (Bonanni 1961). As Quranic schools are single-teacher schools, they are unaffected by low pupil density. Teaching and learning materials are virtually reduced to a copy of the Quran and locally made basic writing equipment. Lessons, in the early morning and evening, are centred on the reading, recitation and memorisation of the Quran. Pupils are instructed on an individual basis and receive individualised assignments. There is no formal examination or qualification, consequently, although there may be underachievers or slow learners, there is no concept of failure. Teachers are responsible for the elevation of the moral and spiritual character of the pupils, so discipline is strict and direct. Islamic teaching is considered a religious duty for every learned person, therefore no formal fees are paid but only voluntary contributions, mainly in kind. Quranic teachers are deeply involved in community life: they administer Islamic law in case of marriage, divorce, inheritance, conflict and civil disputes; oversee communal prayers and rites de passage; and they are often also healers and diviners (Adaw 1986).

Compared to the systems of formal education, particularly in the context of remote areas with sparse nomadic populations, Quranic schools offer the advantage of multiple entry points and flexibility of attendance. They make no impact on the household's economy as cash for school tax and equipment is not required. They usually allow a high degree of community ownership and appear to be culturally non-intrusive, using a teaching and learning approach similar to the traditional patterns used for example in herding training[1]. Furthermore, Quranic schools present little risk of pupil alienation from their households, as they are not employment orientated. Children and adults are taught side by side, whilst the individualised instruction avoids the problem of older children feeling out of place in younger learning groups, a common reason for drop-out in formal education (Junaid 1987).

[1] *According to Whiting and Whiting (1968) herding training is based on individual assignments and supervision, responsibility and discipline, as opposed to the individualism and achievement emphasised within formal education.*

Poverty and school feeding programmes

In areas of low food-security or in periods of exceptional food scarcity, day schools may guarantee the children a daily meal and also prevent school performance from falling due to malnutrition. Schools that provide meals are usually successful in increasing attendance, but the success vanishes as soon as the meal provision is interrupted. Moreover, bad management and corruption are a very frequent hindrance to the good performance of these programmes (MOEST 1999). Extensive research in Turkana district, Kenya, shows that food supplements at school do not compensate for the deficit in nutritional status of children from settled households compared with those who remain nomadic (Campbell *et al.* 1999).

Sparse population and distance education

Distance education through radio programmes has been used in several countries. The most successful example with nomads seems to be the recent UNESCO adult education project in Mongolia, targeting women of nomad households in the Gobi desert, focussing on basic literacy and practical skills and using a combination of radio broadcasts, printed materials and visiting tutors (Robinson 1997). A second project has just started, this time with national broadcasts and a much wider spectrum of topics well beyond the practical scope of the first one (Mongolia fieldwork 2000).

Box 7 Radio education in Mongolia

The project, with UNESCO assistance and the financial support of the Danish aid agency DANIDA, was introduced in January 1996 targeting the nomad women of the six Gobi *aimags* (provinces). The aim was to design a non-formal education programme that fitted nomad women's current situation and lifestyle, using existing resources as much as possible. The focus was on helping the nomads to adjust to the country's transition to (a) the market economy and (b) democratic government. More than 600 teachers were trained, three local radio studios were re-equipped, and some 23 subject-booklets were produced. Small information centres were set up in every *sum* (district). A pilot project was run from January to May 1995, following need analysis interviews with 142 families, provincial and district officials, and community leaders, carried out as early as 1992. For the main phase in 1996, more than 15,000 women aged 15–45 enrolled from 62 *sums*.

The programme was based on a combination of reading materials and radio broadcasts, following a three-day crash course in *sum* centres for all the participants. During the course the women received the booklets, paper, pens, batteries and radio, and met their visiting teachers. Each teacher was responsible for 15 learners, visiting them twice a month. All instructors were local people (vets, doctors, teachers), often nomads themselves, who worked part time on a voluntary basis. The booklets focused on health, income generation and literacy support, covering topics of practical use such as felt making, family planning, making camel saddles and mongol *deels* or traditional garments, preparing milk and meat products, working with leather, growing vegetables, converting animal dung into fuel, civics and small business skills. Although the programme targeted women, very often whole families got involved and the levels of participation and response were very high (Robinson 1997).

Distance education has a long tradition in Australia, where it started at the beginning of the 1900s with correspondence schools and, after 1951, with the first 'schools of the air', using two-way short-wave radio in regions served by the radio network of the Royal Australian Flying Doctors Service (Miranda 1999). Today, it is a well-established system largely based on printed materials and high frequency radio equipment freely provided by the state. Increasingly, a wide range of information technology is being adopted, but the crucial element for success continues to be the quality of the learning materials. Distance education courses are linked to the standard curricula and, at any level there is no difference in the way students' achievements are, regarded, between those using distance education and those taught in a classroom. In the words of Andy Gray, of the Queensland Department of Education, 'there is no single solution in relation to the delivery of distance education – it is a combination of student, teacher, learning materials and communication systems, plus self discipline, perseverance and sense of humour' (personal communication).

Security

Pastoralists live in remote areas often close to insecure international borders and conflict prone regions. Having to walk long distances in order to go to school, for children and especially girls, may present serious risks of attack. Moreover, in northern Kenya for example, schools in remote areas make good targets for the mass-abduction of children, particularly girls, by raiding parties and bandits (Jeremy Swift, personal communication).

Staff and motivation

Schools in pastoral areas have a very high rate of staff turnover and the highest rate of requests for moving to other locations. Teachers are not impressed by the combination of erratically paid low salary, isolation, lack of teaching resources and harsh life conditions. Their motivation is very low and absenteeism is high and, to a certain extent, structural. For example teachers may have to travel long distances with no public transport in order to buy food or collect their wage. It is commonly recognised that, ideally, teachers should be from the same pastoral background as the pupils. However, usually the demand for teachers exceeds the supply. Moreover, a pastoral background is not always a guarantee that the teachers will settle in the job rather than trying to move to town (MOEST 1999).

In addition to these problems, corruption in government employment, and therefore in teaching appointments, is common. In those cases nobody expects the teacher to take the job seriously and the level of absenteeism may be extremely high. Communities don't have the power to raise and sustain the issue (SCF 2000). More often, however, the school is seen by local communities as something totally extraneous, a government enterprise that has nothing to do with them, so what the government does with it may simply not appear to be an issue for them (Semali 1994; Jama 1993).

Language

Teachers who are not from the same ethnic group as the pupils are likely to speak a different language, resulting in serious problems of communication in the classroom. Even if teacher and pupils share a common language, it is not usually the language in which the children are supposed to become literate.

The nature of the language to be used for the acquisition of literacy, if the local language, the national language or even an international language like English or French, is matter of animated debate. The supporters of teaching literacy in the local language argue that it increases motivation (or minimises exclusion) and school productivity. On the other hand, the disadvantages are numerous. Often local languages are only spoken. Defining a written form and producing written materials (even just a primer) in a language that may not have a large diffusion involves very high costs (Vawda and Patrinos 1999). To these problems one should add that of national unity as well as of accessing higher education. A way out from this dilemma seems to be offered by the so called 'pedagogie convergente', with which the national (or international) language is introduced as a foreign language only once children are literate in their own (SCF 2000). On the other hand, as it has been pointed out (Kjolseth, in Harris 1978), the decision to use the vernacular in the early years of school can be merely instrumental to a more successful transfer to the national language, unless important subjects are seriously developed in the vernacular. An example in this direction is the work of ARED, CERFLA and GIPLLN[5] in Senegal, publishing textbooks and thematic literature in the vernacular and providing village-based training for adult groups (ARED 2000; Fagerberg-Diallo 1999; ARED & CERFLA 1998).

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[5] ARED: Associates in Research & Education for Development; CERFLA: Centre d'Etudes, de Reserche et de la Formation en Language Africaines; GIPLLN: Groupe d'Initiative pour la Promotion du Livre en Language Nationales.

A recent study amongst San and Khoe in South Africa argues that local languages are part of specific cultural settings and therefore cannot survive independently from the maintenance of resource access and modes of production on which such settings depend (Crawhall 1999). From an anthropological perspective, it has been pointed out how national or international languages, far from being neutral tools of communication, have usually a local history as the language of the colonial administration or of the hegemonic ethnic group. Such local histories provide added meanings and tie the use of those languages to particular social practices and power relationships even in the present time (Bloch 1971).

2.2 Cultural Problems

Conservatism

That pastoralists are resilient to change is a long-standing unsubstantiated belief, which has been widely analysed and disproved over the last two decades (Hogg 1982; Rigby 1985; Baxter and Hogg 1990; Ginat and Khazanov 1998), but that appears to be, itself, still very resilient in non-specialist circles.

Within the literature on education, in those cases in which pastoralists' adaptability is acknowledged, the myth of resistance to change often remains in the background as an always ready *ad hoc* explanation. Even when it is openly argued that pastoralists *do* change, change itself is understood as 'oriented change', that is change *towards* modernisation, as the only possible and universal process of change. For example, in one of the few studies on the effects of education on a pastoral society, focussing on Kenyan Maasai, when the author argues against the old myth of pastoralists' resistance to change and stressing that Maasai *are changing*, but he does it constantly referring to the increased adoption of 'modern practices', from building brick-houses to joining formal education itself (Holland 1996). Such a mainstream conception of change seems to be relatively unaffected by time and geography: a mid-1970s study on the education of Sami in Sweden underlines that one important goal of the education of minority groups should be 'learning to *accept* change' (Cohen 1976, *author's italics*).

If social organisations change continuously, large and bureaucratised institutions are notoriously slow. Recent work underlines how education apparatuses prove far less responsive than the communities they are meant to provide for, 'all trapped by their own particular history, creaking uncomfortably under the pressure of changing times, and fundamentally resistant to change' (SCF 2000: 13). Although lack of funds and human resources can be a restraint, this alone cannot explain the fact that so much emphasis is put on pastoralists' change whilst the possibility of change in the educational system is largely ignored. Methods of learning and teaching are 'archaic', curricula are rigid, structures are heavily bureaucratic and inflexible, 'children must fit into the system, or they don't go to school. The idea of modifying the system to take account of rural conditions does not exist' (Ibid.: 70). Nomad children in Delhi State, India, for example, find it hard to enrol in school because in order to be admitted they are required to exhibit ration cards, which they don't have, or to provide a *permanent address* in the application form (Davindera 1997).

Many of the education systems in the countries where nomads are found, were modelled on those introduced by occupation governments or colonial administrations, and are still using substantially unchanged styles of classroom discipline and teaching methodologies (SCF 2000; Oxfam UK 1999). By reading the papers on nomadic education produced in Nigeria (for example Ezeomah 1982; Lar 1989; Tahir 1991), one often has the impression that in the imagination of bureaucrats and educationalists the 'pastoral nomad' had just taken the place of the 'African native' who animates certain pages of Julian Huxley, or Lugard's pedagogical speculations (Huxley 1932; Lugard 1922; Ayandele 1979).

Box 8 Teaching the nomads or learning from them?

The 1974–75 Rural Development Campaign in Somalia

In 1972, less than three years after the socialist revolution, the Somali language was scripted and introduced at all levels of government as the official medium of communication. A massive literacy campaign launched with the goal of reaching 100 per cent literacy within two years, was almost completed in urban areas by the beginning of 1974. The government then turned its attention to the rural areas intending to bring them to the same level of achievement within the following year. For that task, which implied reaching out to a largely nomadic population scattered over 650,000 km^2, a technical committee calculated that the campaign needed some 20,000 teachers. In order to gather such a huge labour force, the technical committee recommended to close all intermediate and secondary schools for one year, in order to use their students and teachers for the literacy campaign, which the government did. To take full advantage of the operation, the literacy campaign was expanded into a rural development campaign aiming to 'fight [...] hunger, disease and ignorance' (Osman 1978: 28).

As the literacy campaign used intermediate and secondary school students, the majority of the 'teachers' were untrained. They followed the method used in the Quranic schools, writing letters on a blackboard, reading them aloud and asking the pupils to repeat in order to memorise. Despite the many weaknesses of this approach, it was familiar to both the learners and the teachers, which proved to be an important advantage given the situation. The literacy campaign used a semi-functional primer, specifically designed for the nomads by the National Adult Education Centre (NAEC), and two newspapers for teachers and literacy students also published by NAEC.

The government presented literacy of the rural masses as a 'prerequisite for development' and intended the literacy campaign as an instrument to 'make the masses cognisant of our needs and orient them towards the right path to national progress' (Ibid.). However, besides these objectives in line with the mainstream approach towards education of nomads at the time, other 'added benefits' were stressed. Amongst those, two were particularly unusual: 'strengthening of national unity by demolishing the barriers between the urban and rural masses', and 'a revival of traditional culture through the intimate contacts between the students/teachers and the nomads' (Ibid.: 29). The campaign slogan was: 'What you know, teach; what you do not know, learn' (Brook and Brook 1993).

Further insights into the culture behind the campaign can be gathered from the arguments used by those who showed scepticism, underlining the inexperience of the urban students used as teachers: 'How would such notoriously proud and independently-minded people react to being taught by frivolous urban youngsters who didn't know one end of a camel from the other?' (Jama 1993: 12). Instead, the campaign was a surprising success. When, hindered by the terrible 1974 drought, it was closed down in February 1975, after only seven months, 910,000 of the 1,250 000 registered sat the final test, and 800,000 passed it. Even the relatively high drop out rate was partially due to the drought and to an organisational mistake, as the test took place when many nomads were still on the move from one camp to another and were therefore not able to sit it.

Ignorance

Lack of interest in education is also attributed to ignorance. Illiterate parents are insensitive to the value of education and therefore difficult to persuade. On the other hand, the 'value of education' is such a strong dogma amongst educated extension agents, teachers and programme staff, that even in presence of huge fault, of the education systems on the ground, low attendance rates are still attributed to parental ignorance.

A good recent survey of education in northern Kenya acknowledges the extremely poor quality of the service, including unhealthy boarding conditions, frequent practices of child abuse, comparatively high costs, and virtually no possibility of finding employment once graduated. Nevertheless, when just a few pages later it comes to discussing low enrolment, the explanation given is that 'the high rates of illiteracy among [...] parents contributed to the ignorance of the value of education' (MOEST 1999: 17).

A study on the Bedouin of the Negev desert in Israel critically underlines that 'education system officials have tended to attribute many of the problems of the Bedouin schools to the parents' lack of understanding of the value of education'. Nevertheless, when parents finally resign themselves to a future of incorporation, settle and send their children to school (the same bad schools!) this, it is said 'indicates a growing awareness [...] of the importance of education', rather than the result of decades of state interventions eroding the viability of pastoralism, as well as massive pro-education propaganda referred to elsewhere in the study (Abu-Saad *et al.* 1998: 355). In both cases the reasons behind nomads' decisions about education are either ignored or misrepresented.

Child labour

Children's involvement in the household division of labour is negatively referred to as 'child labour' and represented as situations that deprive children of their fundamental right to education. Child work within nomadic society is seen as resulting from a backward way of life and/or as an effect of poverty. In a way, this may be seen as both a cultural and practical issue, although the cultural dimension is usually given more emphasis.

On a practical level, work by the children is usually a necessity linked to the adoption of risk-averse herd management strategies. Keeping several species like sheep, goats, cattle and camels, for example, spreads the risk of loss due to drought or diseases. However, as each species has different husbandry requirements, this strategy is very labour intensive. In this respect, interventions successful in increasing pastoral livelihood security may allow more risk-prone strategies and free some of the labour. An example of this is the organisation of pastoral labour in Mongolia under socialism, described in Part 2 of this study.

The most common policy response to the 'problem' of children's work has been the creation of boarding schools. Compulsory education has even been seen as an ideal instrument for the eradication of child labour (Sinha 2000). More compromising approaches have adopted an evening, short, or flexible school timetable in order to minimise: (a) the drop-out of children due to labour commitments or other aspects of students' life conditions; (b) the economic disadvantage of removing child labour from the pastoral economy; and (c) the resistance of the parents to send children to school. Flexible age entry may also be adopted, in order to facilitate older out-of-school children. Although these are usually considered second-best strategies, bound to produce lower quality education, there is evidence proving the opposite. In certain Scandinavian areas, for example, to compensate for the shortage of teachers or the long travelling distance, children have been allowed to go to school every other semester or every other day. On the other hand, early entry age or a longer time in school do not appear to have a relevant effect on achievement (Husén 1972).

Children's involvement in household work is a common phenomenon across all levels of livelihood security in nomadic societies. Indeed, better off households with large herds are likely to have a higher labour demand. Most of the time, older children work without adult supervision.

Although children's work is presented in merely negative terms within the mainstream literature, household work often appears to be perceived by the children as a positive experience, and by their parents as a process of crucial educational value:

> Children's work is perceived as a process of socialisation, progressively initiating children into work and transmitting skills that will enable them to support themselves and their parents and contribute to the community [...] the most important thing one can do for a child is to teach him or her to work [...] death can overcome the parents at any time; that's why it is essential to train children young to the work of the parents (SCF 2000: 69).

On the contrary, leaving a child without work is considered amongst the nomads as a sign of parental negligence: 'only parents who did not have their children's best interest at heart would let them grow up without work responsibilities' (Ibid.: 70).

At the same time, school experience is seen as providing the opposite of education: children not only fail to learn how to secure a livelihood, but lose what they were taught in early life and absorb alien and negative values and lifestyles. At school they are 'softened', humiliated, trained into dependency, laziness, irresponsibility, lack of discipline and of self-esteem. On the other hand they are made to believe that their school experience raises their social status amongst non-schooled people, so that once back in their communities they often become arrogant, presumptuous and disrespectful.

Moreover, there are situations in which child labour (outside the pastoral sector), is linked to cost-sharing education policies. In northern Kenya, increasingly high costs of primary education in a context of general pastoral impoverishment have aggravated the loss of livelihood security. As a result many children dropped out of school to work in business premises, gold mines or around refugee camps, or serving in wealthy households in exchange for food (MOEST 1999). In Mali, schools in the countryside are rare and rural children sent to school in town usually have to lodge with strangers who treat them as free labour, take less care of them and are more demanding than with the other children of the household (SCF 2000).

Cultural alienation

Another reason for keeping children, or some of them at least, out of school, is the perception of formal education as a process of cultural alienation. 'Modern' education has a long history of this, and in many countries the memory of more or less forced schooling aimed at transforming children into Christians or Communists, agriculturalists or factory workers, is still fresh in the mind (Hickerson 1966; Rybinski 1980; Sifuna 1987; De Young and Nadirbekyzy 1996; Habeck 1997). More recent campaigns to transform pastoralism into a livestock industry and nomads into 'livestock farmers', as for example in Nigeria (VerEecke 1989; 1993; Ezeomah 1997), still enjoy considerable international support.

Nomads are well aware of the risk of cultural alienation involved in sending a child to school. A study on education provision to nomads carried out by UNICEF Somalia points it out:

> Nomads in Somalia view both schools and schooling as alien things that do not contribute to the pastoral way of life'. They believe that such facilities will in the end alienate their children from them and the society at large (Jama 1993: 9–10).

The alienating dimension of schooling is not mitigated by an approach focussing on curriculum relevance, as in the case of Nigeria. This is how an expert in curriculum development working closely with the Nigerian Commission for Nomadic Education writes about teaching science at primary school: 'Scientific knowledge should be *inculcated* in the nomadic child [...] it should help to *eradicate* superstitions/beliefs' (Lar 1989: 60 *author's italics*).

Even within a responsive approach, school education is seen as something ultimately meant to equip children to leave their communities:

> ...poverty [and] disempowerment [of parents] limit their ability to provide some critical skills and kinds of knowledge which their children will need even to survive the type of life they were born into, *let alone to move beyond it* (SCF 2000: 15; *author's italics*).

Some parents may decide to take the risk because of the prospect of high rewards in terms of income or status. However, usually they try to minimise the damage by carefully selecting who goes to school and who stays within the household. The first-born son, on whom may depend the ritual continuity for the management of the family herd, may be kept out of school (Ponsi 1988). So may girls in certain societies, if females are particularly associated with cultural continuity (Dyer and Choksi 1997b; Abu-Saad *et al.* 1998).

Education of girls

In almost all pastoral societies (although not only there), girls make up most of the out-of-school children. This is not always the case. In Mongolia, for example there are more girls than boys attending school and the situation is increasingly unbalanced in colleges of higher education and universities, where around 70 per cent of students are women (Government of Mongolia 2000; UNICEF and MOHSW 2000). In Tibet it is even more complex. Girls are at the same time more likely to drop out of primary school and yet be more numerous at university, with a higher level of illiteracy amongst women than men (Bass 1998).

There are several reasons why girls drop out of school more than boys. In part this may be due to the fact that, as girls move to a different household with marriage, paying for their education is not considered a good investment (Roth 1991). Indeed, to the extent to which education is associated with status, a woman is supposed to be less educated than her husband and therefore a girl's education will actually reduce the choice of potential husbands, particularly within the pastoral context. On the other hand, a marriage *outside* the pastoral economy may not bring livestock and, above all, is less likely to expand the pastoral social network of the household. Sedentarisation or the education of the parents doesn't seem to affect parental choice with regard to girls' education (Fratkin *et al.* 1999).

However, the high numbers of girls within non-formal education programmes, particularly those adopting a responsive approach, suggests that the issue of girls' school drop-out is more likely to be explained by the structure of the school system rather than by parents' aversion to educating girls. In many pastoral societies (and not only) women are considered to be the 'bearers of the [extended] family honour' (Abu-Saad *et al.* 1998) or of traditional values and cultural continuity. In these cases they are ardently protected against the risk of external interference. Pregnancy before marriage may bring shame to all the relatives of the girl and ruin her life forever, as she will not be able to find a husband (for example Woldemichael 1995, about Eritrea). In these situations, parents will find it impossible to send their daughters to boarding schools or even to day schools, if that involves distant travel and to lose sight of the girls for long hours. Cultural alienation may also be perceived as a more serious problem where females are concerned. The Karimojong perceive school as a situation in which girls are *dis-educated* (Owiny 1999).

A study amongst the Rabaris of Kutch, India, notices that:

> success at school entails adaptation to culture of the school which [...] do not reflect those at home. These tensions find their strongest expressions in reservations over the schooling of girls, since the Rabaris see women as the carriers of their culture (Dyer and Choksi 1997b: 89).

Similarly, a report on non-formal education in northern Kenya points out how the girls were the majority, but:

> mothers escorted girls to attend the out-of-school programme in order to provide security on the way and to make sure that what is taught at school did not in any way interfere with culture (MOEST 1999: vii).

Girls were the majority also in the case of Tostan, a basic learning project in Senegal. In 1993 girls made up more than half of those in attendance of the project, but only 32 per cent of the school enrolment (Dall 1993).

Out-of-school programmes seem to attract higher proportions of girls, so why not formal schools? Is it really a matter of making parents more sensitive to the importance of girls' education (as predominantly argued by proponents of formal education) or rather of making the system more sensitive to the difficulties girls and parents face in joining formal schooling, *despite* their interest in education.

Parental selection

Usually a lack of interest in education is deduced from enrolment and drop-out figures. Apart from the issue of the reliability of these figures, such deductions can be very misleading with regard to the real nature of the demand. Parents do not simply send their children to school or keep them at home, they make choices: to keep some of the children at home whilst sending some to school. This behaviour is shared by both poor and wealthy households, and therefore cannot be explained on a purely financial basis – i.e. parents send to school as many children as they can. The rationale for such choices is to be found in the pastoral economy, both contextual to the time of the choice and future, as perceived and planned at household level.

The basic productive unit in the pastoral economy is the household. Dryland pastoralism is an extended family enterprise, never an individual one. Consequently, the logic that drives parents' choices about their children's education, is a household logic, based on considerations such as risk distribution, opportunity costs and labour demand at household level.

Contextual reasons for parental choice may combine with more constant criteria. In a study on selective under-enrolment at primary school amongst the Samburu of Kenya, the author pointed out that sex and birth-order were major criteria of choice:

> First-born sons, upper primary age girls and some of the non-first-born sons (needed for herding) will remain outside the modern school system as long as the nomadic way of life proves to be a viable alternative (Ponsi 1988).

In other cases the first-born son or, as in Mongolia, the girls, may be preferred for education (Holland 1992; Dyer and Choksi 1997b; UNICEF and MOHSW 2000; Government of Mongolia 2000). During the fieldwork carried out in Mongolia for this study, one nomad interviewed in Arkhangai district had seven children, five of which had dropped out of school before the compulsory Grade 8 and were looking after the family herd. Of the two children still in education, one had just started primary school and the second, a girl, was at university. The father said that his intention for the girl was 'to spare her the harshness of life as a nomad woman', as she is his only girl. Instead, he wanted to have her employed in Ulaanbaatar to provide him with 'a base in the city', for when he goes there to do business. To his great disappointment, the girl had just fallen in love with a nomad, married him and interrupted her study, upsetting all his plans.

From the point of view of the pastoral household economy, the perfect education policy is one capable of producing one or more educated household members who will be able to provide links with the city or with the wider society, possibly increasing economic differentiation. Consequently, the selective education of one or few children is not seen in negative terms, as a limited appreciation of the benefits of the service or as an economic incapacity to educate all. On the contrary, it is more likely to be a sign of a prosperous and carefully managed pastoral economy, within which the role of town employee has become part of the division of labour. Although formal education is provided as an alternative to the pastoral economy, it appears to be used by pastoralists as functional to it, and, therefore, only to the extent to which it actually *is* functional to it.

Within the culture of formal education provision, the perfect educational policy is one resulting in 100 per cent literacy: education for all. Education policies that are built on considerations about individual development and universal basic rights therefore result, on the ground, in conflict with and continuous misunderstanding of the demand.

Demand for education

If school enrolment and attendance in pastoral areas are overall much lower than the national levels, there are numerous examples of active and even enthusiastic responses to education interventions that allow (or at least promise) some compatibility with a pastoral livelihood. For example, the first initiatives of the nomadic education programme in Nigeria in the 1980s were seriously jeopardised by a response far beyond the numbers calculated during the planning phase (Lar 1989). In Somalia, in the early 1970s, most of the schools in the countryside were closed due to the lack of teachers, despite a high demand for educational facilities from pastoralists (Turton 1974).

Pastoralists' interest in education, as it appears from the literature, is of two kinds. In the first case the decision to send one or more children to school is based on an opportunistic logic and the hope to gain some extra skills, income or other advantages. Even better if such goals can be achieved with little stress to the household economy and organisation. This attitude usually welcomes skill-oriented non-formal education or alternative education structures (for example a flexible timetable or evening school) which are not very intrusive. Non-formal education for out-of-school children enjoyed comparatively high levels of participation in West and East Africa (SCF 2000; Oxfam UK 1999; CEI-AA 1999; MOEST 1999), Central China (CiC 2000; Bass 1998) and Mongolia (Mongolia fieldwork 2000). If the system and the economic conditions of the household offer a sound possibility of continuing towards a university degree, however, formal primary education may be preferred, as it is a more readily accepted entry-point for higher education.

In the second case, the decision to take up formal education is motivated by a loss of hope in the viability of pastoralism as a livelihood strategy, and is usually associated with the decision to settle and with a wish for integration, if not for assimilation, into the non-pastoral society. But the reasons are not just economic. Life in the drylands is harsh. A form of specialisation of pastoral societies is the development of 'support ideologies'. Pastoralists' strong sense of dignity is linked to pride in their own identity as nomads, pastoralists and a distinct ethnic group. Such a perception of themselves may be increasingly undermined by relentless propaganda depicting them as ignorant, poor, dependent and powerless, made even more destructive by a feeling of being cheated in almost all interactions with the wider society. Under this sort of day-to-day pressure, some people may decide that the benefits of remaining pastoralists are not worth the effort. A common strategy in these situations is to invest in schooling for one child, usually the eldest son, relying on his first wage to help the rest of the family. Parents who have come to such a decision are primarily interested in the symbolic value of formal education, as a rite of passage out of pastoralism into the 'modern' world, and as a way to gain social status. As long as education carries that symbolic value, they do not seem to be bothered by its quality or content (Dyer and Choksi 1997b).

These parents are not impressed with attempts to integrate pastoral knowledge into the formal education curriculum in order to make it relevant to livestock keeping. From their point of view, they turn to schooling because they have lost trust in pastoralism as a viable option for their children. In their perception, if the traditional way of life – and the knowledge attached to it – were still viable, they would have remained in it, and schooling would not have become a necessity. Poor quality or irrelevant schooling will be preferred by them to high quality non-formal education focussing on effective generation of relevant skills but lacking the symbolic value and status associated with 'going to school' (Dyer and Choksi 1998; 1997a).

Curriculum relevance

Education systems rely almost always on standard curricula: all pupils in the same grade everywhere in the country learn the same things more or less in the same way. However, pupils' environment and experiences can vary greatly from place to place, and from one way of life to another. Lack of curriculum differentiation has become one of the major explanations for pastoralists' supposed low interest in education and for the high drop-out rate from schools in pastoral areas. The basic argument is that school curricula are developed by sedentary people for sedentary people (or even by urban dwellers for urban dwellers) and therefore are largely irrelevant to nomads' experience and concerns. Low relevance generates low interest and lowers motivation, therefore causing low enrolment figures and high drop-out rates. This calls for a differentiation of the curriculum and the design of special ones for pastoral areas, relevant to nomadic life.

This argument is used with little further explanation from positions sometimes very distant from one another, taking for granted that the nature of its 'content' is plain and obvious. However, this is not the case. 'Nomadic life', is anything but a straightforward concept: this study has touched upon some aspects of its controversial nature in the previous chapter, discussing the issues of sedentarisation and modernisation as goals of education. Who decides what 'nomadic life' is? Who decides what, of it, is relevant and must be matched by the curriculum? And then, of course, who decides about curriculum relevance? For example, is teaching the marketing of livestock relevant? Is it relevant teaching about desertification, and the 'need' to decrease the number of animals to improve their quality and prevent overgrazing?

Nigeria, again, offers a good example, as the issue of curriculum relevance has been crucial to their national Nomadic Education Programme since the mid-1980s. Relevance is to be achieved in two ways: introducing relevant topics and modifying the look of standard subjects to match the nomads' background. Social Studies for example includes 'History of Nomadic Fulani, and Nigeria' as well as 'The culture of Nomadic Fulani' and 'The culture of other Nigerians'. Elementary Science has been adapted by adding 'Animal Management (including cattle rearing, poultry and fishing where applicable)' and 'Agricultural science (including pasture regeneration)'. Standard subjects like Maths have undergone 'cultural adjustment' through introducing relevant sets of problems and examples (FME 1987). Nevertheless, relevance is still functional to the orthodox goals of sedentarisation and modernisation, its main aim being to make school more appealing to nomads, its influence more persuasive and its transforming work on pastoral society more effective:

> The curriculum cultural adjustment will consist of taking into consideration the nature of the prevailing mentality in the nomadic society to establish the teaching strategies, the subject matter presentation, and material resources adequate to the way in which the subject [i.e. the nomad] perceives the world in order to facilitate the desired changes (Salia-Bao 1982: 33-34; also Lar 1991b).

This approach assumes that:

i. culture can be reduced to essential elements, on which to base the 'cultural adjustment';
ii. pastoralists' interest in basic education for their children results from a desire to learn how to improve livestock production;
iii. modern science is so superior to local knowledge (and it is recognised as such by pastoralists) that even at primary level, education can be useful for pastoralists' day-to-day tasks;
iv. the people who are now pastoralists, once modernised will still be livestock producers.

However, these assumptions are not supported by the evidence:

i. this perspective ignores the dynamic and relational dimension of culture,[6] a limit which in part explains the last assumption about pastoralists maintaining their 'essential' character as livestock producers, through the transformation created by education;
ii. pastoralism is not just a mode of production, and household's livelihood strategies are not only production-oriented; moreover, pastoralists' demand for education appears to be driven by an interest in the opportunities it promises outside the pastoral economy more than by a desire to acquire further pastoral specialisation;
iii. cutting-edge theories in pastoral development acknowledge structural limitations in modern science in dealing with the highly unpredictable dryland environment, and call for the support and expansion of more flexible local knowledge and ways of knowing (Scoones 1994); local perceptions of modern science are far from giving it a position of superiority: in Egypt for example, Bedouins practising desert cultivation think that agricultural engineers 'just copy traditional ways of solving problems' (Danner & El-Rashid 1998: 71). In Rajastan, India, local livestock owners prefer to pay traditional healers rather than using government veterinary services which are free of charge (Rathore, Rathore and Köhler-Rollefson 1999);
iv. this assumption results from defining pastoralists by their (ideal) productive role, that is reducing pastoralism to an occupation and pastoralists to those people with such an occupation. To the extent to which pastoralism is a way of life rather than an occupation, its reason of being must extend well beyond livestock production. If pastoralism as a way of life becomes unviable, it is not possible to foresee which alternative direction each individual household will take. Pastoral cultural values and experience of the world might be better suited to a career as a lawyer, or as a professional gambler, or

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[6] A perspective questioned within social anthropology since Barth (1969). For a recent analysis of political uses of the concept of culture see Wright (1998).

> a driver or even a bandit rather than as a 'modern livestock producer'. Bedouin mothers wish their educated children to become white collars employees and high status professionals, and the girls to become teachers (Abu-Saad *et al.* 1998). According to a survey amongst primary school children in Eritrea, 'the majority would like to be government officials and teachers … a few mentioned professions such as doctor and aeroplane pilot …' (Woldemichael, 1995: 38).

Responsive approaches should overcome the risks associated with the curriculum relevance explanatory paradigm by using participatory methods to involve pastoralists in the process of definition and identification of what is relevant to them, or even in the generation of the curriculum itself, retaining flexibility in order to be able to adapt when the need for change arises. Usually these approaches are process oriented and therefore their aim is to ensure relevance within the day-to-day education context more than to produce a relevant curriculum for nomads. Flexibility in this case seems more crucial than relevance. However, recent analysis of community based projects in light of social differentiation and power relationships suggest that even this avenue is not without risk (Guijt and Shah 1998; Leach *et al.* 1997; Hogg 1992).

Ultimately, the lack of relevance of the standard curriculum appears to be an inadequate explanation for low enrolment and high drop-out rates amongst pastoralists. Mongolia for example, the only country to reach almost 100 per cent literacy with about half of the population being nomadic, achieved this by using a standard curriculum, non-relevant to pastoral way of life, highly academic and teacher-centred (MOSTEC 1999). In this respect, the experience of responsive non-formal programmes suggests that attitudes and behaviours and a non-antagonistic cultural environment play a bigger role in meeting the nature of the demand, than relevance itself. The 1981–1990 Nomad Education Programme in Somalia, described as successful because of its 'relevant' or contextualised curriculum (Brook and Brook 1993), was based on non- intrusive 60 day adult education courses with candidates selected by the elders, two for each nomad group. Similarly, the successful tribal education programme in Iran used a standard curriculum, but implemented it with an innovative approach at the base of which was the conviction that nomads were a cultural resource to be preserved and supported (Hendershot 1965).

A problem of cultural clash seems to affect education provision in rural areas even outside pastoral societies. Research on education amongst farming households in Ghana shows a striking similarity with the problems and explanations used concerning pastoralists. Officially, child labour within the household takes most of the blame for low enrolment and drop-out. However, further investigation reveals a combination of poor quality service and a local perception of the broad educational apparatus as being a vehicle for an undesirable culture, antagonistic to rural communities' values and culture (Blakemore 1975; Casely-Hayford 1999).

The issues presented in this chapter are summarised in the table below.

Table 2

Phenomenon	Supply side's explanation	Demand side's explanation
Low Enrolment Rate High drop-out rate	- target groups' mobility - nomadic life style - remoteness of pastoral areas - pupils' low motivation - teachers' low motivation - parents' ignorance - nomads' conservatism - child labour - curriculum poor relevance	- lack of the service - cultural distance of the service - unknown language of teaching - cultural alienation at school - symbolic value of school (for avoiding non-formal education) - insecurity for children travelling alone or living at school - low quality of the service - parental selection - risk-prone school environment for girls - generally hostile school environment
	Solutions	**Broader issues**
	- boarding schools - distance education - mobile schools - self-sufficient schools - feeder schools - non-formal programmes	- lack of political will to ensure the service - resistance to change of the education system - necessity of risk-averse herd management strategies - interference with local knowledge - unsympathetic cultural environment

The representation of the problems of providing education to the nomads and their most common explanatory paradigms and solutions, appear to be rather distant from the situations on the ground. The reasons for such distance and the further problems that this may cause are dealt with in the next section.

3 WHAT – THE IMPACT OF EDUCATION

This section presents the results of education provision to nomads as they are understood within specific programmes and analyses. It then introduces the issue of differentiating between results and outcomes, and proceeds to a critical analysis of common outcomes drawing from a wider corpus of studies on pastoralism.

Quality of Data

Official quantitative data on the impact of education policies are to be approached with caution. Figures for enrolment and attendance rely on local records that are often both incomplete and inaccurate. It is common for schools to keep no record of school drop-out or transfers (MOEST 1999). In certain areas, frequent 'dual registration' makes the records rather meaningless. There is 'dual registration' when a child from a non- pastoral group, already registered for education in the home district, is registered again in a school in a pastoral area in order to take advantage of positive discrimination policies designed to facilitate access to secondary education to pupils from those areas (Närman 1990). Usually these children are relatives of women from non-pastoral ethnic groups married into a pastoral household (Holland 1996).

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The 'Impact' of Education

It is common knowledge that education policies have little impact in pastoral areas. Figures about literacy, school enrolment, drop-out rate, continuity into secondary education or girls enrolment within those areas usually represent the lowest values in each country. These figures are used to argue for the introduction of special programmes designed for the inclusion of nomads into education systems that in the present, as in the past, are seen as leaving them unaffected. On the other hand, the success of new policies or alternative programmes is measured in terms of nomads' participation levels and increase of literacy percentage. Conversely, if the literacy gained during a special programme is later lost, for example due to the lack of written materials for practising it, the programme is said, retrospectively, to have had little impact (e.g. Jama 1993, on the education programmes in Somalia in the 1970s).

Throughout the literature, the impact of education is acknowledged and measured only by reference to what education is expected to do. However, the lesson from decades of development practice is that programmes *do* something even (and above all?) when they don't do what they are supposed to do. By narrowing the analysis of the impact of education to measuring only the expected results, particularly when those results are so rarely achieved, we deal only with a very incomplete and misleading picture. The first research on education amongst the Maasai (Kenya) carried out by a Maasai, underlined the unbalanced attention towards government policies within education research in pastoral areas, and the resulting blindness about the consequences and implications of educational participation for the pastoral way of life (Sarone 1986).

Achievements and Outcomes

When looking at the impact of modern education, no distinction appears to be made in the literature between achievements and outcomes, active and passive effects. This attitude can go so far as to defining the 'outcome' of education *a priori*: 'the outcome of creation and propagation [sic] attained through education is the improvement of the quality of life of the nomads which will enable them to attain equality with the sedentary people' (Ezeomah 1997). Consequently, the largest impact of educational programmes remains hidden: those children who by the simple fact of staying at home become 'excluded', 'illiterate' or 'educationally disadvantaged'; those who are enrolled but fail to complete the course, or who complete the course but fail to get the job they or their parents expected, or any job at all; those who have been made pregnant at school, or have been humiliated or alienated from their own cultural background and from the lifestyle of their families without another taking its place; those whose families have reduced their mobility (to the detriment of the household economy) or settled in order to enable them to attend school. People who have experienced the impact of a process designed to make them leave pastoralism, fall back into the institutional setting and social organisation of their communities as aliens, dependent but no longer fully belonging.

Moreover, as in the case of development more generally, it is possible to talk of a *discourse* of education, seeing it as a phenomenon much wider than individual policies and programmes. This broad understanding of the 'education' phenomenon would include such things as the way the issue of education and pastoral development is constructed within newspapers and political speeches, by governments, in courts of law, by local officers involved in the delivery of social services; the way representations of pastoralists and the 'need for education' play a role within wider development policies geared for pastoralists or affecting pastoralists indirectly; the way pastoralists' representation of themselves and of poverty and prosperity is altered through the process of formal education, as it is directly or indirectly experienced. How do all these aspects of the phenomenon of education interact with pastoralists' livelihood strategies? For example, how do they affect pastoral specialisation? What is their impact on pastoral institutions for the generation, distribution and reproduction of knowledge?

Education and Social Capital

Social norms, networks and relationships of authority play an especially critical role in pastoral livelihood systems. Formal education that 'sets some men apart from their fellows' (Broch-Due and Anderson 1999: 12, with ref. to Hutchinson 1996) introducing new divides within households and communities, undermines customary forms of social capital without creating new ones. As with development programmes more generally, formal education always has an effect, even it is not always the effect intended. What are the real outcomes of existing patterns of nomadic education, and especially the relationship between education and pastoralists' social specialisation? What is the impact of education practices on social capital, on the way people establish and maintain those bonds and social networks that are crucial to livelihood security?

In Siberia in recent decades, 'as a result of the education in boarding schools, the Evenki children gradually became alienated from their parents' lifestyle' (Habeck 1997: 6). A UNDP report on the situation of education in Afar, Ethiopia, warns that:

> there is a danger that students may become estranged from both their families and their society by their educational experience, and thus be less competent to contribute in the long term to the advancement of the Afar people (UNDP-EUE 1996: 7).

The promises associated with the discourse of education may divide families by raising expectations in the children that the parents will never be able to match, or vice versa. Situations that would be considered undesirable or even unacceptable within mainstream society are described with unconcern, almost with satisfaction, when they involve non-literate nomads and education programmes. This is how the evaluation team of an Out of School programme in northern Kenya describes the 'willingness of children to learn':

> Some were quite bitter towards their parents, who could not let them go to school. Others simply ran away from their families, joined the OOS programs and lived with relatives (MOEST 1999: 60).

In their work on education amongst the Rabari of Kutch, in India, Dyer and Choksi point out how education is viewed by the elders as impacting negatively on the cultural ethos of the community:

> Over time, the clash between the two cultures of home and school leads to fragmentation between educated and non-educated members of the ethnic group [...] amongst those who have gone through school, a disenfranchised youth is growing [...] While [school] does provide part of the means towards making successful economic adaptations, it also brings with it social tension and stresses that challenge the cohesion of the ethnic group' (Dyer and Choksi 1997b: 89–90).

Education and 'Indigenous' Knowledge

Cutting-edge theories in pastoral development agree that successful dryland pastoralism requires extremely high levels of specialisation, both at an individual level (for example veterinary and medical knowledge, knowledge of plants and soil properties, management skills and endurance of harsh living conditions), and at a social level (for example resource management and risk spreading institutions; institutions for the generation and transmission of knowledge; institutions for the reproduction of 'support' ideologies, e.g. support for psycho-physical endurance, moral economy, livestock care).[7] On the ground, of course, individual and social specialisation overlap. At the individual level, such expertise is the result of many years of 'on the job' training, full-immersion in the pastoral context, watching older relatives and gaining first hand experience. At the social level it is the result of adjustments, inventions and selection over many generations, sometimes over many centuries.

Modern education, both as a broad phenomenon and as particular practices, overlaps local patterns of generation, distribution and reproduction of knowledge, and it is likely to affect pastoral specialisation both at the individual and institutional level. The institutional dimension of customary education in pastoral societies and its relationship to modern education are to date a virtually unresearched field.[8] Research on local or 'indigenous' knowledge has up to now focused mainly on 'know how', whilst very little is known about the institutional aspects of local knowledge and the social matrix and organisational conditions of its existence and use.

The analysis of the implications of non-equilibrium ecology for dryland pastoral development, carried out during the past 10 years, puts great emphasis on opportunistic management strategies to track ecosystem variability. Efficient tracking requires 'high levels of skilled labour input' and the institutional conditions for flexible movement over extensive rangeland (Scoones 1995: 20). Under conditions of high unpredictability and variability the capability of contingent responses, flexibility, and adaptive planning associated with local knowledge now appears critical; whilst the assumption that modern science and technology can, under the same conditions, provide planned solutions to specific problems, is dismissed (ibid.). In addition to dealing with unpredictable environments, pastoralists who spend most of their time in small groups and in areas usually remote from government services, must be able to rely on themselves (both in terms of individual knowledge and social networks) more than urban or village people.

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[7] A good example of support ideology is the *Pulaaku* ethic amongst the pastoral Fulani, see Bonfiglioli (1988); VerEecke (1991); de Bruijn and van Dijk (1995).

Anthropological research emphasises the dynamic character of local knowledge(s), as different from modern formal systems of shared knowledge. Local knowledge is not generated in protected environments out of time and out of place, neither is it oriented to replication and comparison. Instead, it seems to exist always here and now, as someone's practices, embedded in particular cultural, economic, ecological, and socio-political contexts, which are themselves resulting from local and non-local processes (Richards 1989; Hobart 1993; Scoones and Thompson 1994).

These traits appear to be particularly strong amongst people making a livelihood in highly variable and unpredictable environments. A study of agricultural knowledge among a group of Andean farmers points out how the concepts used by local people are too equivocal and inaccurate for a systematisation of the kind used in applied science and technology development. However, it is argued that this imprecision, far from being a liability, is a key element in the working efficiency of the concepts: 'it is precisely the vagueness or 'imprecise' character that allows for interpretation and change' (van der Ploeg 1989: 149). Rather than a cycle of the kind reproduction-innovation-reproduction, it seems to be more a matter of permanent fuzziness in which a key element is the lack of concern for perfect reproducibility. In the words of Cohen (1993: 31), it is 'less a matter of what is known than of how it is known'. This raises concerns about what happens to local 'fuzzy' cognitive patterns when they are faced with cognitive patterns based on the formalisation and objectification of knowledge, as within the school system (Krätli 1998).

Research on ethnoveterinary medicine has pointed out how expert traditional healers are becoming increasingly hard to find, despite herders' preference for them, as their knowledge and expertise are not passed on to the new school-educated generations (ANTHRA Team 1999).[9]

School education may not meet parents' and pupils' expectations of high status and well-paid employment, but it is certainly effective in promoting a belief in the superiority of modern science over traditional knowledge, which is at the base, for example, of the resilient trust by government development officers in exotic breeds as the only way to improve local livestock despite all the evidence (Kavoori 1996). In Rajastan, this has resulted in 'a growing trend for livestock breeding to be disarticulated from traditional societies and to shift into the hands of land owners with capital' (Köhler-Rollefson and Rathore 2000).

However, in the face of a growing concern for the erosion of domestic biodiversity, ethnoveterinary research emphasises that '[local] breeds represent the outcome of social processes, and that they will not survive outside the social context and production systems that formed them' (Köhler-Rollefson 1993: 16).

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[8] Galaty's (1986) study on practical cognition amongst schooled and non-schooled Maasai boys remains a courageous but isolated experiment.

[9] Traditional healers are increasingly in demand as highly cost-effective community based extension agents for veterinary services (see McCorkle *et al.* 1996).

It is therefore necessary, it is argued, to preserve and integrate local knowledge and institutions 'into all phases of livestock genetic resource conservation' (Köhler-Rollefson and Bräunig 1999b: 3).

An extensive study of the economic transition amongst the pastoralists of Rajastan argues that the interventions intended to increase productivity failed because of:

> an inability to grasp the broader conjuncture of production relations within which these interventions were inserted. For what is inserted is not just a technology but a process of production that entails its own specific complex of relations (Kavoori 1996: 207).

It would not be forcing the argument to apply it to the context of education provision. The representation of basic education as a simple transfer of technology has been popular for decades and to a large extent still is (Street 1984; 1993). Also in the case of education, what is introduced is not just a technology, but a whole process of production of knowledge, with its own specific complex of relations.

Box 9 Dynamic ecosystems and local knowledge.
From equilibrium to non-equilibrium ecology

Since colonial time and up to the mid-1990s, mainstream pastoral development has been dominated by an ecological paradigm (still popular today) that presents traditional pastoralism as environmentally unsustainable. At the core of this paradigm is the idea that the equilibrium dynamics of grazeland ecosystems are stressed by culturally grounded overstocking practices (Herskovits' famous 'cattle complex'[i]), combined with a structural inability to limit the number of animals on the range (Hardin's famous 'tragedy of the commons'[ii]), causing overgrazing and, on the long term, land degradation. Consequently, it was thought that development policies should start from controlling and regulating herd management practices and rangeland tenure in order to prevent overstocking.

A radical re-thinking of range ecology in the 1980s argued that the orthodox ecological paradigm could not be applied to most dryland ecosystems due to their characteristic non-equilibrium dynamics. In other words, erratic rainfall and frequent unpredictable drought should be seen as the major factors determining the availability of pasture, and not livestock and tenure (e.g. overgrazing)[iii].

Having included unpredictability and variability in the theoretical model of the ecosystem, non-equilibrium ecology is able to recognise the complexity of pastoral adaptation, the critical role of mobility for the successful tracking of pasture, and the high degree of specialisation of pastoral knowledge. Within the new analytical framework, 'traditional' pastoral systems show higher returns than ranches under comparable conditions, returns that could not be maintained with settling or mixed agriculture solutions[iv].

Environmental uncertainty has been used to support a critique of the mainstream development orthodoxy of planned intervention. Instead, it is argued, non-equilibrium environments require contingent responses, flexibility, and adaptive planning. In the context of structurally heterogeneous and discontinuous rangeland productivity, traditional pastoral strategies of flexibility and opportunism appear to be a crucial, cultural capital to be supported and used as the basis upon which development interventions should be built[v].

[i] Herskovits (1926); [ii]. Hardin (1968); [iii]. Behnke and Scoones (1993); [iv]. Scoones (1995); [v]. Ellis and Swift (1988).

The Culture of Education

Although potentially useful in creating access to new sources of income, formal or 'modern' education is antagonistic to a nomadic way of life. If culture can be defined as 'what needs to be known in order to operate reasonably effectively in a specific human environment' (Bloch 1998), the human environment reproduced through formal education is one in which nomadism is represented as something to be left behind, an economic aberration and a backward way of life.

As powerfully expressed by an analyst of the political dimension of literacy, 'it is often difficult to work for literacy building on the already existing literacy, precisely because the 'already existing' is seen as what literacy is supposed to contribute to obliterate!' (Street 1998).

A Maasai scholar explaining the failure of the Kenyan education policy in the 1970s underlines 'the practical irrelevance of an imported Western model of schooling and its basic incompatibility with prevailing social and cultural values and practices' (Sarone 1984).

Recent research underlines how projects of oriented change are embedded into education programmes for nomads and how such programmes antagonise local patterns of learning and socialisation (chapters of Lenhart, Casimir, and Rao, in Dyer 2000).

Formal education, as it is conceived, designed and delivered, enters into competition (from a position of power) with the generation, distribution and reproduction of pastoral specialisation and, consequently, creates a threat to the livelihood security of the pastoral household, particularly of those more vulnerable. To the extent that pastoralists lose control of the processes of generation and transmission of knowledge, human resources that are crucial to a sustainable livelihood in arid-lands are under-utilised or lost.

A recent study on the education of tribal communities in India underlines that:

> Teachers' attitudes are critical especially in relation to the identity and self-image of children who belong to vulnerable and culturally marginalised groups. The hidden curriculum of the classroom through teachers attitudes and peer interaction often conveys to tribal children negative stereotypes of their community that prevail in society at large (Nambissan 2000).

Curriculum Relevance and Traditional Knowledge

Approaches to formal education concerned about curriculum relevance claim to preserve valuable traditional knowledge by integrating it within specifically tailored curricula, so that formal education will add modern knowledge to what is already known. This raises alarming questions about the ways the research, collection and choice of what is 'valuable' are carried out, and how and by whom the result of that work is then translated into a 'modern' curriculum.

Recent research on cognition suggests that expert knowledge (defined as the knowledge that underlines the efficient performance of complex day-to-day practical tasks), in order to be functional must be non-linguistic, but formed through the experience of, and practice in, the external world, and packed in 'apparatuses [or 'mental models'] dedicated to handle families of related tasks' (Bloch 1998: 10). Consequently, the popular conceptualisation of the process of thinking as language-like logical sequences, largely subscribed to by scholars from all disciplines, including those currently concerned with the collection and systematisation of indigenous knowledge (for example, Seeland 2000), is disproved and rejected as misleading.

In light of this new understanding of the process of cognition, it is likely that the present attempts to preserve 'traditional' expertise, which are rooted in the popular theory of cognition, will miss (and lose) the most important part of it, including the institutions for knowledge generation and transmission, presumably also 'invisible' to a scientific methodology focussing on (and based on) language-like phenomena. This has, consequently, obvious and strong implications for the popular purpose of integrating 'valuable' traditional knowledge into formal education curricula in order to be free of dismissing the rest.

Education and Resources for Change

Pastoral societies, like all societies, are dynamic, that is they produce change and the possibility for change. Change is structural, built into the way institutions reproduce themselves (for example the age system), and relies on the actions of those individuals, common to all societies, who feel uneasy about how things are and who are curious of new information and new experiences, but at the same time have strong feelings (shared by the rest of the community) about their own identity as insiders (Ginat and Khazanov 1998; Kurimoto and Simonse 1998; Rigby 1992; on age system and education provision amongst the Maasai, see King 1972). A background study on education provision to pastoralists, for the SCF-DFID collection *Towards Rensponsive Schools* (SCF 2000), stresses the need to recognise and take into account the dynamic dimension of pastoral livelihood strategies, reminding us that pastoralism changes independently from any external pressure to change and not necessarily in the direction of such pressures (Lambert 1999).

Education, as presently conceived and provided, can affect pastoral societies' potential for endogenous change, paradoxically at the very moment in which it presents itself as an instrument of change. On the one hand it plays a major role in undermining in young people their sense of identity and belonging to their own ethnic group, their understanding of the pastoral way of life as a life of dignity, and their independence. Dyer and Choksi, in a comparison between schooled and non-schooled youth amongst the Rabaris, underline that:

> Non-literate Rabaris, although uneasy in unfamiliar social settings, maintain a strong sense of disdain for mainstream society and no interest in adopting its social customs. They do not seek to be like others, maintain high self-esteem and derive from their ethnic identity a great sense of strength and independence. The absence of formal education does not matter at all (Dyer and Choksi 1997a: 227).

On the other hand, centralised and pyramidal education systems contribute to the centre-periphery divide, acting as a major channel for conveying human resources, particularly those who would be crucial in the generation of change, away from pastoral society and the countryside. Where education is not perceived as something inherently negative by the nomads, as for example in Mongolia, it is common to hear from parents themselves that if a child is bright then he or she should continue into higher education. But this means following a series of steps that will take the youth to work in the city. In a way, the move appears 'natural' and even desired, as 'the city is the place where things happen, whilst in the countryside there are no opportunities: there is nothing to do here, no information, no links, we are cut off from the world' (Mongolia fieldwork 2000). However, the large divide between the city and the countryside is not a necessity but the result of centralising policies that turn resources away from local dynamics, including the people who could generate them, in order to concentrate them in the city. The education system provides one of the main channels for such a transfer of resources. Independently from its economic and political rationales, it results in brain drain and the undermining of rural potential for endogenous development: a transfer of resources that seems to go in the opposite direction to rural development and that, in the long term, is likely to work as a self-fulfilling prophecy for the myth of pastoral conservatism.

The issues presented in this chapter are summarised in the table below.

Table 3

General issues	Impact of education
- Existing data on the impact of education programmes are largely unreliable. - Evaluation methods for education programmes do not distinguish between achievements and outcomes. - 'Education' should be understood as a broad phenomenon affecting nomads' livelihood way beyond the process of provision and classroom context.	- Creating new divides (status, values, expectations, etc.) within families and the society, education undermines social capital. - Knowledge production patterns over-imposed through schooling overlap or antagonise endogenous patterns of generation, distribution and reproduction of knowledge, crucial for effective herd management in dynamic ecosystems and for the survival of domestic local species. - As part of the reproduction of mainstream culture, schooling antagonises the reproduction of nomads' culture and local patterns of children's socialisation. - Selection of essential cultural characters and recollection of indigenous knowledge for the creation of 'relevant curricula' limited to language-like knowledge dismiss the most important component of local expertise (i.e. the non-linguistic one). - Centralised education systems combined with unsympathetic school culture cause brain drain from the countryside to town, undermining local dynamics and potential for change.

The analysis of the literature lead us to a few hypotheses concerning the relationship between the success of education policies for nomads and the culture expressed both within the school environment and within the wider education discourse. In order to test these hypotheses a short period of fieldwork was carried out in Mongolia. Part 2 presents the results of this fieldwork.

PART 2 MONGOLIA CASE STUDY

INTRODUCTION

One of the main issues emerging from the analysis of the literature is the relationship between formal education results and the attitude towards nomadism within the school culture as well as national culture. Despite the variety of technical solutions attempted over the last three decades within countries facing difficulties in providing education to nomads (boarding schools, mobile schools, tailored curricula, etc), the large majority of these countries share a cultural attitude towards nomadism that ultimately attributes a negative value to it. The national culture and the culture expressed within the education system are antagonistic to nomadic culture. Nomadism as a way of life is seen as incompatible with development and modernisation, and therefore bound to disappear. Such a cultural attitude is likely to make the context of formal education repulsive to nomads, therefore preventing technical solutions from succeeding. Conversely, successful education practices with nomads are likely to take place within a cultural context, which is not antagonistic to nomadism.

In order to test this hypothesis a short period of fieldwork was carried out in Mongolia. Mongolia was chosen because of its unique success in providing education to its largely nomadic population, moving from nearly zero to almost 100 per cent of enrolment between 1950 and 1990. Moreover, this exceptionally positive situation has rapidly deteriorated over the last decade, since the transition from a command to a market economy.

Fieldwork took place from 24 June to 7 July 2000. The researcher travelled in part through Arkhangai *aimag*[10] visiting *sum*[11] schools and nomad families, and also interviewing key informants in Ulaanbaatar, the capital city of Mongolia. In Arkhangai, eight schools were visited along 1,000 kilometres across the north-western territory of the *aimag*. At the time of fieldwork schools were closed, but it was always possible to meet the head and a few teachers. Among school personnel, we met a slightly larger number of women (including headteachers). The proportion was inverted among nomads, although we did have a chance to speak to women and children as well as elders. Data collection was carried out through small focus group discussions in the field, and semi-structured interviews in Ulaanbaatar. In total 34 people were interviewed, 11 of whom in Ulaanbaatar.

1 BACKGROUND INFORMATION

With a territory almost the size of western Europe, Mongolia has a population of about 2.4 million, 700,000 of whom live in Ulaanbaatar. Of the remaining 1.7 million, some 500,000 live in *aimag* and *sum* centres whilst the others (about half of the entire population) live scattered throughout the countryside as nomadic pastoralists.

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[10] The largest administrative unit in Mongolia, normally translated as 'province'.

The climate is continental, sharply seasonal with temperatures spanning from –40°C in the winter to +40°C in the summer. Most of Mongolia is dryland, with annual precipitation of between 100 and 400 mm; less than one percent of land is classified as arable. During the winter the pasture can be inaccessible to livestock for long periods, buried under too much snow or locked below a thick layer of ice. Moreover, as in the recent disaster, winter problems can add to summer drought in particularly noxious combinations.

After the 1921 Bolshevik-inspired revolution and until the first multi-party elections in July 1990, Mongolia had a Soviet-influenced socialist centrally planned economy. Initial plans for the collectivisation of livestock in the 1930s were strenuously opposed by the herders. However, by 1960 virtually all of Mongolia's herding households were members of collectives. Collectives (*negdel*) were productive units overlapping the territories of the districts (*sum*), and further subdivided into brigades, *kheseq* (teams) and *suur*, the basic herding unit of one or two households. Animals owned by the collective were allocated, on lease, to the members, who in return provided a certain quota of products. Beside the livestock on lease, herders were allowed to keep a limited number of animals of their own. The herders received a monthly wage and, once a year, received a bonus for deliveries above the target or, in case the target had not been met, had to complete the quota from their own herd. Such organisation of labour was designed to achieve economies of scale in order to compensate for the chronic labour shortage.

Free health, veterinary and education services, along with consumer goods at subsidised prices, were available throughout the countryside. In each sum, schools provided formal education up to grade 8 or 10, offering dormitory facilities for nomad children who could not be lodged with relatives.

In 1990 the country changed from the one-party communist state to a democratic republic and from a centrally-planned to a market-driven economy. At the time of the transition, Mongolia's economy was highly integrated within the Soviet-led Council for Mutual Economic Assistance (CMEA), with more than 30 per cent of national income and most trade and energy supplies depending on the USSR. Between 1990 and 1993 virtually all livestock were privatised and the collectives dismantled. At the same time the state massively reduced jobs in the public sector. Herders found themselves with more livestock but without the security that was guaranteed by a regular salary and *negdel* membership. Thousands of waged labourers lost their jobs and, having received a share of animals during the process of privatisation of livestock, turned to pastoralism. Herding households that in 1989 accounted for about 17 per cent of all households in Mongolia have increased to 35 per cent (National Statistical Office 2000), mainly during the period between 1991 and 1994. Investments in services, including education, were substantially reduced and consumers' fees were introduced. As a result, lower quality services were run at comparatively high cost, particularly in the rural context where cash became scarce. Within three years school attendance dropped from nearly 100 per cent to about 75 per cent.

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[11] The administrative unit immediately below the *aimag*, normally translated as 'district'.

2 OUTCOMES

Our working hypotheses were the following.

1. During the socialist period, nomadic pastoralism was thought of by Mongolian planners and the general public as a key part of national identity and the national economy, not condemned as something backward. (a) Indigenous knowledge about pastoralism was neither ridiculed nor marginalised from its social context in the education process. (b) As a result of investment in pastoralism and new institutional frameworks, productivity increased in the pastoral economy, leading to a reduced need for child labour. (c) This created, within the context of a centrally planned economy, a viable pastoral economy, with a positive national image.

2. This context has changed since liberalisation. Changes resulting from this are as important an explanation of educational decline since 1990 as the lack of resources.

With regard to the second hypothesis, our only concern during the data collection was to find out whether and how cultural attitudes towards nomadism in Mongolia actually changed after liberalisation and, in the affirmative, whether such change had a role in the new phenomenon of out-of-school children. To date, very little research has been carried out on the causes of such a phenomenon.[12] This study is based on a very small-scale investigation, meant only to support the literature review, and by no means aims at providing a complete explanation.

2.1 Reasons for High Enrolment During Socialism

Culture

Beyond the important structural measures, at the very root of Mongolia's success with education provision to nomads one finds a non antagonistic culture towards nomadism, both at the national level and within the school system, with a deep respect for herders and a continuum between nomadic and sedentary life. Mongolians had to fight to maintain this attitude. Their Russian advisers clearly thought nomadism was backward and primitive and where state power was strong enough – as in the Soviet Union, especially Siberia and Kazakhstan (ILO 1967) – they ruthlessly eliminated it. In Mongolia, the local political power resisted this idea, and their position was strengthened by the violent popular resistance to the first attempt at collectivisation in the 1930s.

Today, the impression received when talking to teachers and school heads in rural areas is that nomadism is seen as a perfectly normal way of life. In fact, as an issue, nomadism seems to score rather low, something that may be taken as a sign of the degree of normality, and therefore 'invisibility, associated with it. As one can be a teacher or a driver, one can be a herder, and consequently a nomad. Even more interesting is the continuum that there seems to be between nomadism and sedentary life, a continuum within which a nomad can chose to study and go to university just as a teacher can decide that for the time being it is more convenient to be a herder and become a nomad. Virtually everybody in *sum* and *aimag* centres has some close relatives who are nomads, and this is also likely to be true for the majority of people in Ulaanbaatar. Urban children are sent to rural relatives during the summer, and nomad children are sent to stay with relatives in town during the school terms.

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[12] The 1994–95 survey by the Department of Anthropology of the National University concluded that the main reason in rural areas was the increase in labour demand for household activities. Some more insights can be found in the recent Mongolian Adolescents Needs Assessment conducted by UNICEF in co-operation with the Mongolian Ministry of Education and Social Welfare.

Some teachers interviewed, particularly the women, wore traditional clothes. One head received us in a *ger* [13]–office in front of his house. In another *sum*, a group of teachers and the head said that as working in school is becoming less and less rewarding they are seriously considering turning to nomadism. A teacher of maths in his fifties said that all of his children had completed grade 10, three out of five had become nomads and he was planning to join them after retiring, in order to take care of his own livestock. Asked whether they think that nomads will or should settle, a future that seems to be considered obvious within most of the literature from other countries reviewed during this study, teachers and heads in every school visited laughed, and then explained that the herders cannot settle or they will loose their livestock. If school is seen as an opportunity for nomad children to access higher education and university and, in certain cases to move to live in the *sum* or in Ulaanbaatar, that didn't seem to be considered as an obviously desirable change for everybody. Asked whether they had ever heard of children who, born and educated in town, decided to move to the countryside and become nomads, none of the interviewed showed surprise or amusement. On the contrary, they seemed to find the question perfectly legitimate and usually said that such cases were quite common. Very often children from the *aimag* centre, or even from Ulaanbaatar, are sent to spend the summer holiday with nomad relatives, and sometimes they develop a taste for that lifestyle and either drop out of school or return once they have graduated.

Schooling and sedentary life

Despite the many differences in terms of lifestyle and social relationships, living in the *sum* centre during school terms is not perceived by nomad children as a change from nomadism to sedentary life. The school year is only nine months long, from September to early June, with one month of holiday in the middle, during which nomad children usually live with their parents as during the summer. Nomads move camp about every three months, with more frequent moves during the summer, whilst by going to school their children actually stay continuously in the same place for no more than four months at a time. Although children's residence in *sum* centres seems to have been responsible for generating a penchant for the comforts of urban life and causing a certain degree of alienation from pastoral skills (Potkanski and Szynkiewicz 1993), it is undeniable that virtually all present nomads above the age of 25 in Mongolia have had between 4 and 10 years of schooling.

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[13] The circular mobile hut used by nomads.

Culture rather than policy

The positive attitude towards nomadism appears to have been (and to be) much more a matter of culture than of policy. In fact, during socialism there seems to have been very little formal recognition of the nomads' life conditions and needs. Centres for nomad youth, with services, were created to encourage settlement but they were abandoned as soon as pasture became scarce. All schools in the country worked with one standard national curriculum that reflected the reality of urban more than rural (let alone nomadic) life. Browsing through a primer of the 1980s one finds pictures of computers and astronauts, of urban landscapes, of well furnished apartments and, of course, portraits of Lenin, but no reference to herding or nomadism. Curriculum relevance didn't seem to have been an issue. Nevertheless, none of the nomads interviewed (all of whom had spent at least eight years in boarding schools during socialism) remembered the experience of going to school as a negative one. On the contrary, they all seemed to have good memories of it despite having been homesick, remembering the way they were treated, the relationships with their fellows and the encounter with a world which to them, having grown up in small family contexts in remote places, was almost entirely new.[14]

This suggests that the culturally insensitive approach of education policies and structures must have been culturally adjusted at the informal levels of curriculum delivery, classroom situations, personal behaviours and attitudes, both within the school context and within the wider social environment. When specifically asked about the technicalities of the curriculum, usually teachers acknowledged there was little relevance for nomadic pastoralists and an inclination for the values of sedentary life, but all stressed that those features are themselves of little relevance as in practice that is not the way they deliver it. Even when specifically asked about curriculum relevance, one teacher said that he used to spend little time on the more alien topics, instead introducing others such as processing of livestock products and traditional norms of behaviour. He also said that such flexibility would no longer be possible, in part because of the new curriculum, in part because teachers' professionalism and initiative has been undermined by the post-socialism drop in their level of livelihood security, both in terms of material resources and of social status.

These findings confirm hypothesis 1(a).

Organisation of labour

Other reasons mentioned for the high attendance rate refer to the formal organisation of the pastoral labour force. The organisation into collectives with their subdivisions in brigades, *kheseq* and *suur* under state supervision, formally excluded children from any involvement in production. Moreover, collectives achieved economies of scale at a higher level (Mearns 1996b), particularly by (a) transcending kin bonds and grouping together more households than the corresponding traditional institution, and (b) introducing species specialisation and to a lesser extent animal age-class specialisation at brigade level. The latter measures had a particularly strong impact on household labour organisation, since different species and different age-classes need to be herded separately and therefore demand much more labour.

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[14] This matches with Demberel's account of school years collected by Helen Penn when he was Director of Education in the Gobi Altai Region. Demberel's account is unpublished, but excerpts from it are in H. Penn, 'Culture and Childhood', in L. Alenan and B. Mayall, (eds), *Negotiating Childhood*, to be published by Falmer next year.

Specialisation involves risk-prone herd structures, including a high proportion of breeding females and consequently young animals during the spring, more vulnerable to the risk of severe climatic fluctuation. However, the risk was made acceptable by state ownership of the animals and by heavy investments by the collectives in shelters as well as assistance with fodder and labour in critical periods and the introduction of livestock insurance.

There is evidence, however, that acute pastoral labour shortages persisted despite the collectives (Mearns 1993; PALD 1991). It is therefore difficult to say to what extent collectives actually contributed to the high rate of school enrolment and attendance. The fact that the organisation of labour, provision of education, and enforcement of laws on compulsory attendance were all under the control of the same authority, is likely to have been at least as influential. The relatively small number of nomads compared to the present also played a role, resulting in lower boarding costs to the state.

These findings confirm in part hypothesis 1(b). But there are also important factors not envisaged in the hypothesis.

Law enforcement

All those interviewed in rural areas, both teachers and nomads, mentioned a strict and effective policy of enforcement of the law on compulsory education as the primary reason for the high rate of school attendance during socialism. They said that cars were sent to the countryside to collect drop-out or non-enrolled children, whilst steep fines and even expulsion from the collective (with the consequent withdrawal of the livestock on lease) were threatened against families who failed to obey the law. They said their parents, although having themselves gone to school for several years, would have preferred to keep them at home for both emotional and economic reasons.

Organisation of the education system

A second group of reasons given for the success of the education policy during socialism concerns the way education provision was organised and the fact that it was entirely free of costs.

In 1990, before liberalisation, Mongolia's expenditures for education were 11.3 per cent of GDP. The exceptionally high investment made by the state in order to ensure free, good quality primary and secondary education for all, also represented a public tribute to all those involved in the education system and an acknowledgement of the value attributed to their work. School staff, particularly in rural areas, enjoyed good salaries, a high social status, and working conditions that enabled them to perform at their best. Schools had adequate boarding facilities and all the costs of compulsory education were covered by the state, including boarding costs, books, uniforms, etc. Moreover, the state funded bright students up to post-graduate degree level and specialised training. As the state was the only employer, the completion of such education lead to secure and permanent employment.

Still today the short school year (nine months from September to June), combined with a school age starting at eight years old is comparatively unobtrusive to the pastoral life cycle. School holidays, one month in January-February and three in the summer, match pastoral household peaks of labour demand. Nomad children begin to be substantially involved in household activities when they are about five years old. Starting school at eight years old allows the children three crucial years to socialise within the pastoral context and to acquire basic pastoral skills upon which to build during school holidays in the following years. However, presently Mongolia is considering lowering the school entry age to six years, in order to align with the majority of the countries in the world.

2.2 Reasons for the Increase of Out-of-School Children after 1990

Whilst all those interviewed attributed the success of education during socialism to more or less the same reasons, when it came to explaining the massive drop-out rates after 1990, the order of the causes and the emphasis put on them changed quite substantially. Teachers and heads pointed to the privatisation of livestock as the main cause, made more acute by less effective enforcement of the laws on compulsory education and the introduction of cost-recovery policies. Some also mentioned the fact that many educated parents believe that they can teach their children basic literacy and numeracy without the need for formal schooling. Nomads put much more emphasis on the new costs of education, mentioning labour demand only as a secondary and not always determinant cause. Households that have turned to nomadism more recently have found it particularly difficult to adjust to the new livelihood conditions and have had to give priority to solving herd-management and financial problems rather than to children's education.

Organisation of labour

The main ways in which the privatisation of collectives' livestock is said to have influenced school attendance are (i) a shift, at the household level, from risk-prone to risk-averse production strategies, with the consequent loss of economies of scale and the increase in labour demand for herd management, and (ii) a sharp increase in the size of private herds, which generated in herders a false sense of security and the belief that education was no longer necessary. The latter argument, advanced by some teachers, is further developed to explain the recent decrease in out-of-school children by a new awareness of the importance of education amongst nomads after the experience of impoverishment following unpredictable climatic conditions.

The organisation of pastoralism into collectives took much of the risk connected with environmental unpredictability away from pastoral households, as well as freeing them from the substantial amount of labour demanded by multi-species herds. At the same time, free formal education provided a channel for absorbing the redundant child labour. Education offered high social recognition and the possibility of continuing up to university at no cost and with the certainty of good employment at the end. Conversely, after 1990–92, education obviously slipped down the list of national priorities, with the consequent loss of social recognition. Higher education no longer guaranteed employment; the cost of crucial local services increased or cost-recovery was introduced; whilst all the risk associated with dry land pastoralism fell back onto pastoral households. In order to cope with the new situation, herders have turned to risk-averse household production strategies, including low-risk herd structures, which boosted labour demand. This argument is also used to explain why (a) a higher proportion of out-of-school children are boys, and (b) children from wealthy households are as likely to be out-of-school as those from poor households, although for different reasons. Data previously collected in Arkhangai suggests that school drop-out increases at the extremes of the wealth spectrum: the richer households are more likely to suffer labour shortage because of the large size of their herds; the poorest on the other hand, may have the same problem because they can't afford to have workers as dependants (see Mearns 1996a). Moreover, with the new costs associated with education and the liberalisation of the labour market, education itself has become a risk-prone strategy that in present conditions is preferably avoided. The last Participatory Living Standard Assessment (World Bank 2000), found that the cost of education is closely associated with impoverishment on the short term, either directly or as a hindrance to asset acquisition. Today's low impact of law enforcement on school attendance can be, at least partially, explained by the state's loss of direct control over pastoral livelihoods after the dismantling of the collectives.

Organisation of the school system

Although after liberalisation the number of nomads, and therefore of nomad children, sharply increased, dormitory facilities in schools were drastically reduced and in some cases eliminated. Meanwhile parents were asked to contribute to boarding costs with a certain amount of meat per term, about 70 kilograms, a per-child quota decreasing for the second and third child from the same household, after which boarding was free.[15] Other costs like books, stationery, uniforms, and transport also became the responsibility of parents. In 1996 only 4.1 per cent of pupils were living in dormitories compared to the 14.5 per cent in 1990, despite the sharp increase in the number of nomads after liberalisation (MOSTEC 1999).

School drop-out amongst herding households in different wealth categories is explained with reference to a variety of factors. Direct costs associated with education (for example meat-tax and cost of school-books, clothing, etc.) are a more severe constraint for poorer households, though significant for all. On the other hand, it is mainly richer families, with large herds, that withdraw children (boys) in order to meet the household's labour demand (World Bank 2000).

According to data collected during the recent adolescents' needs assessment (UNICEF and MOHSW 2000) a decline in motivation is amongst the major causes of school drop-out. The data are relevant to the entire phenomenon of out-of-school children, as the survey included children from 10 to 19 years old, that is all school age children apart from the first two years, when it is rare.

Some of the reasons given by the children for their decline in motivation mirror those collected from families and school staff during fieldwork, and refer to: (a) bad quality buildings, insufficient dormitory facilities, inadequate heating, lack of technology and laboratories; and (b) badly paid and tired teachers, often working double shifts or taking on additional work in order to earn enough.

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[15] This 'meat tax' is now formally abolished.

The report for the EFA 2000 Assessment underlines that 'social and economic difficulties were not the only reasons behind school; the school environment and way of teaching also played a role' (MOSTEC 1999).[16]

There is also more in the PLSA report on the changing perceptions of teachers and related problems in education. For example, in at least one community in Dornod, people were convinced that the local primary school teachers were also prostitutes and were a bad influence on their pupils (World Bank 2000).

The fall in motivation also results from a decline in expectations: for example the parents or relatives who, although educated up to grade 10, lost their jobs in 1990–92; the current example of brothers and sisters who complete grade 8–10 or even a university degree and then are unable to find a job or have to live on temporary (i.e. insecure) employment. In any case, the nomads interviewed argued that people like them, living outside settlements and with no links with the government (for example through their jobs) have little hope of finding funds for college tuition fees.

Another increasingly important reason for dropping out of formal education seems to be bullying. Children from sedentary families may pick on nomad children, associating nomadism with low achievement and ability. One parent interviewed said that his children were constantly picked on at school by the children living in the *sum* centre. He politely said that he thought it was just the consequence of *sum* children's bad up-bringing, but also stressed that he had never experienced or even heard of such episodes during his own childhood. In this context, one would be inclined to argue that bullying is indeed evidence of a new cultural attitude towards nomads since liberalisation, and the sign of a time in which *sum* children may pick up from a changing cultural environment that nomadism is somehow inferior to sedentary living. Doubtless, with the increasing flow of imported images and values reaching *aimag* and *sum* centres through channels only available within settlements, the divide between urban and rural culture is growing wider.

Moreover, now that teachers' performance is assessed on the basis of pupils' achievement, low achieving children are increasingly seen by teachers as a threat to their own livelihood and may be picked on, bullied and even induced to leave the school. On the other hand, teachers' social status has dropped and the power relationships in the classroom have acquired new tensions. Teacher bullying is lamented as a common problem by out-of-school adolescents (UNICEF and MOHSW 2000).

Cultural change

All the people we spoke to across Arkhangai *aimag*, appeared very keen to stress that there is no difference in the way nomad children and the children living in the *sum* centres are treated at school, as well as there being no difference in their performance as long as they remain at school. In general, questions concerning the hypothesis that the non-antagonistic culture towards nomadism in Mongolia, both within the school system and outside it, may be under revision, giving way to a widening cultural divide, met firm denials and, more importantly, seemed to surprise and slightly disconcert people in rural areas.

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[16] Part 2, Analysis: Lack of interest in learning (http://www2.unesco.org/efa/wef/countryreports/country.html).

Once back in Ulaanbaatar, where internet shops are mushrooming and groups of teenagers wear the latest baggy trousers, spotless t-shirts, huge trainers and reversed baseball caps like teenagers in New York, London or Tokyo, the hypothesis of a widening cultural divide becomes harder to dismiss. Indeed, in the city we collected discordant opinions on this point. Some of those interviewed emphasised that despite the external differences due to the different degree of exposure to foreign images and fashion, youths in the capital love the countryside and maintain a deeply rooted respect for nomadism. Others emphasised an increase in the previously unheard of phenomenon of bullying, as well as the existence of a 'new view' of pastoral problems, reinforced by the disasters caused by the *zud* [17] earlier in the year and arguing the structural inadequacy of pastoralism in Mongolia and the need to reform pastoral production strategies or even move away from nomadism altogether. Paradoxically, the privatisation of herds seems to have transformed livestock into a primary 'national resource' and some people are already seeing herding strategies based on nomadism as an obstacle to its technologically advanced, scientific and profitable exploitation.[18]

Moreover, post-socialism Mongolia has revived ancient history and traditional culture as the basis for its new national identity. The figure of Chinggis Khan has been rehabilitated and now his portrait appears on the pages of primers instead of that of Lenin; attempts to reintroduce the traditional script, including teaching it in schools, have been made; and Buddhist monasteries have reopened. This political appropriation of tradition affects the public representation of Mongolian nomadic pastoralism and must have an impact on nomads' feelings about their own identity and self-representation. In a way, not only the livestock but also nomads' cultural identity has become a national resource, increasingly beyond the control of the nomads themselves.

In September 1998, a UNESCO supported programme opened an International Institute for the Study of Nomadic Civilisations (IISNC) in Ulaabaatar, and called, for the following year, an international symposium 'to discuss the present situation of nomadic civilisations and its perspectives' (*The Mongol Messenger* 1998, October 21: 5). As we were told, this triggered a very animated debate within some academic circles in the capital, on the issue of whether such a thing as a 'nomadic civilisation' actually exists or, rather, the definition is a contradiction in terms used as a catch-phrase, and 'nomadism stops where civilisation begins'. Independently from the content and future developments of such a debate, the creation of the IISNC and making nomadism into an object of study and a concern for preservation is, arguably, a sign of a new distance with which nomads are perceived, at least within certain official settings.

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[17] Extended period of frozen deep snow, making it impossible for the animals to reach the pasture beneath.

[18] For examples of the new model of hi-tech pastoralism and of the more extreme position of settling nomads, see the papers by B. Chadraa and Dumaajav Baatar presented at the International Symposium on Nomads and the Use of Pastures Today, Ulaanbaatar, 13–15 December 1999 (also in *Nomadic*, Newsletter of the International Institute for the Study of Nomadic Civilizations, January, February 2000, No. 4–5).

3 CONCLUSIONS

We wanted to test the two following hypotheses:

1. During the socialist period, nomadic pastoralism was thought of by Mongolian planners and the general public as a key part of national identity and the national economy, not condemned as something backward. (a) Indigenous knowledge about pastoralism was neither ridiculed nor marginalised from its social context in the education process. (b) As a result of investment in pastoralism and new institutional frameworks, productivity increased in the pastoral economy, leading to a reduced need for child labour. (c) This created, within the context of a centrally planned economy, a viable pastoral economy, with a positive national image.

2. This context has changed since liberalisation. Changes resulting from this are as important an explanation of educational decline since 1990 as the lack of resources.

With regard to the first hypothesis the data collected during fieldwork in general confirm it. However, the extent to which people identified with nomadic culture rather than condemning it as backward was mainly at an informal level, an attitude remained from the pre-socialist period more than an official policy. Indeed, even if national education policies didn't directly try to settle nomads, nevertheless they were inspired by the Soviet model, designed with a clear inclination for sedentary people rather than nomads. The cultural impact of such policies was largely limited by the informal cultural interface provided by school personnel and the social environment of rural centres. A crucial factor thus seems to have been that most teachers and education personnel themselves had a nomadic background, and not the urban or settled agricultural background of most teachers of schools for nomads in other countries. This, above all, contributed to make schooling a pleasant experience for nomad children and reduced (but not entirely prevented) the alienation of nomad children from their culture and from learning pastoral skills. The data collected suggest that the high enrolment and attendance rates during socialism would not have been reached without the combined effect of: (a) such cultural attitudes; (b) strict law enforcement; (c) an organisation of pastoral labour that, achieving economies of scale, freed children from household activities; and (d) an organisation of the education system and of its relationship with the employment sector that maintained high motivation in school personnel, students and parents.

With regard to the second hypothesis, there is no doubt about the link between the sudden increase in the demand for labour at the household level in the early 1990s and the abandoning of the organisation of pastoral production introduced under socialism. In particular, the return to relatively small groups of basic productive units (organised increasingly on the base of kinship) and to risk-averse herding strategies (for example mixed-species herds) meant the loss of the economies of scale achieved under socialism. The result was a renewed need for child labour, and a strong disincentive to schooling. Cost-recovery in education further increased this trend.

In the area of fieldwork, at least, we found no evidence that the positive attitude towards nomadism at an informal level has changed. Still now there are streams of young people moving between sedentary life and nomadism in both directions. For all the young educated people who find employment in town and leave nomadism, there are also many educated boys and girls who, out of passion or out of necessity, decide to become nomads. Children from families living in rural centres or even in Ulaanbaatar are still often sent to stay with nomad relatives during the summer holidays, and it still happens (although much more rarely than in the early 1990s), that sometimes they develop a taste for the nomadic life and return to it after graduation. On the other hand, at a more general level the hypothesis is not completely ruled out. We did find signs of a change of attitude in Ulaanbaatar, and the recent Adolescents' Needs Assessment reports a substantial incidence of classroom bullying among the causes of school drop-out. Although such a change in attitude does not seem to have reached the countryside yet and certainly was not the cause of the massive drop in school attendance in the years immediately after liberalisation, a projection of the data collected suggests that it will concur to make such a problem more acute in the near future.

The findings of the fieldwork are summarised in the table below.

Table 4

Research question	Finding
What were the key factors in 1960–1990 educational success with nomads?	i An organisation of pastoral labour that: (i) enabled the use of more productive but risk-prone herd management strategies, (ii) created economy of scale, (iii) freed household economy from the necessity of child labour ii A culture strongly sympathetic towards nomads, both within the school and within the general public iii An organisation of the education system that provided both teachers and parents/pupils with strong motivation iv A rigid and effective law enforcement policy
What changes associated with liberalisation triggered the educational decline of the last decade?	i The socialist organisation of pastoral labour has been largely abandoned, with consequent loss of economy of scale. The new situation only allows for labour intensive risk-averse herd management strategies. The children have been involved again in household production. ii Cut of funds to the education sector and massive unemployment for educated people have undermined status and livelihood of teachers and abated pupils' expectations. iii Pupils motivation is further lowered by a new increasing phenomenon of bullying within the school context, targeting nomad children. iv Law enforcement policies have become loose or difficult to enforce

The next and last section summarises the issues encountered during the review of the literature and the fieldwork in Mongolia, trying to point out a main focus for future policies.

PART 3 KEY ISSUES FOR FUTURE POLICY

Nomads are a significant population world wide, showing little sign of disappearing and, in some areas, actually expanding. They often represent a significant part of national food and export commodity production. The problem of the education of nomads is not going to go away, and is now one of the major challenges for education provision.

Educationally, pastoralists appear to be a paradox. From the point of view of official education, that of schools and statistics, they are a complete failure: in terms of enrolment, attendance, class room performance, achievement, continuity to higher education, and gender balance they regularly score at the bottom of the ladder. Educational campaigns may raise some interest at the beginning but are soon deserted. Even the rare literacy achievements are often lost within a few years.

3.1 The Paradox of Nomad Education

Some may argue that the cause of the failure is because logistical difficulties and cultural resistance have held back the wave of national education programmes under the influence of the Education For All global campaign. This may be. But even so the paradox remains: despite their educational failure, pastoralists may be poor (some of them) but are far from being a mass of drifting unskilled under-class as they should be, according to the popular understanding of illiteracy and of basic education as a fundamental right.

On the contrary, pastoral life in the drylands requires high levels of individual and social specialisation. They can be very confident, articulate and entrepreneurial, have good negotiating and management skills, and show a strong sense of dignity and self-respect. Their societies usually have long traditions of self-government, with sophisticated institutional structures and exceptionally high levels of social capital. Indeed, pastoralists who do become unskilled under-class are more likely to be from the ranks of those with some years of formal education, who were left at the bottom of mainstream society and who never made it back into the pastoral niche.

The review of the literature on education provision to nomadic people suggests that a consideration for this paradox should be at the centre of every programme evaluation as well as of every analysis of the continuous failure, with regard to nomads, of the universal project of education.

3.2 Education and Productivity

The relationship between education (of whatever sort) and productivity (however defined) appears to be a constant theme. Unfortunately, the main case that could offer some robust evidence on this topic, the successful primary education of nomads during socialism in Mongolia, needs further research in this respect. The main insight from the Mongolia case study seems to be that education is likely to affect productivity indirectly more than directly. Not because the literate pastoralist is a more productive pastoralist, but because the education of one or two members of a pastoral household may positively affect the livelihood security of the entire household by increasing the potential for economic diversification, with the consequence of allowing more productive, but risk-prone, herd management strategies. However, claims about the beneficial effects of education on pastoral productivity are not substantiated by data.

Moreover, although there may be nothing wrong with trying to increase productivity as a development goal, it may become a problem due to the application of inappropriate methods by which productivity is sought to be developed. This is particularly true of the assumption that in order to increase productivity it is necessary to separate pastoralism as a way of life from pastoralism as a way of production, abandoning the first in order to modernise the second. The increase in productivity has been pursued until now at the expense of reliability and reproduction – that is, sustainability.

3.3 Education Policies and Nomad Culture

Education policies appear to condemn nomadic culture at many levels: in their principles and goals, in their explanatory paradigms; in their solutions and implementation; in their approach to evaluation.

Principles and goals based on values that are claimed to be universal, are used to undermine the legitimacy of the culturally located decisions of those people who are supposed to benefit from education, whilst old myths and false or untested assumptions (alone or in the background of better quality information) result in belittling people's livelihood strategies:

Universal values and assumptions	***vs***	**Nomad culture and livelihood strategies**
focus on the individual as isolated entity	*vs*	economy based on household and lineage group
ideal of universally commensurable knowledge	*vs*	knowledge tied to specific social dynamics
children's right to education	*vs*	parental choice and household livelihood
automatic empowerment from literacy	*vs*	awareness of real roots of disempowerment
evolutionary superiority of sedentarisation	*vs*	necessity of mobility
pastoralism as a way of production	*vs*	pastoralism as a way of life
poverty alleviation	*vs*	a livelihood within the nomadic niche
legitimate formal education	*vs*	effective non-formal education
education for all	*vs*	household division of labour

Explanatory paradigms of the 'problem' of providing education to nomads, and related solutions, result in undermining people's livelihood security, either directly or by veiling the real issues. Seen from the nomadic perspective, such paradigms look very different:

Explanatory paradigms…	***vs***	**Nomad livelihood security perspective**
nomadism and pastoral way of life	*vs*	lack of political will to ensure the service
the myth of pastoralists' resistance to change	*vs*	rigidly conservative education systems
child labour	*vs*	risk-averse herd management strategies
parents' lack of education	*vs*	bad quality schools and de-motivated staff
gender educational bias	*vs*	risk-prone school environment for girls
lack of motivation and cultural isolation	*vs*	inappropriate teaching medium (no vernacular)
… and solutions		
boarding schools	*vs*	children's socialisation in the pastoral context
curriculum relevance	*vs*	loss of local knowledge
education for economic diversification	*vs*	cultural alienation

Evaluation tools focusing on the administrative level (figures for enrolment, drop-out, etc) and classroom context, but ignoring the overall impact of the phenomenon of education, result in undermining people's livelihoods:

Education outcomes	***vs***	**Nomad livelihood characteristics**
new social divides	*vs*	social capital
supremacy of science	*vs*	fuzzy or adaptive local knowledge
state ideologies and modernisation ideologies	*vs*	support ideologies for pastoral livelihood
exogenous institutions of knowledge	*vs*	local (endogenous) institutions of knowledge
school timetable	*vs*	time-consuming pastoral specialisation
selection of IK for curriculum relevance	*vs*	non-linguistic nature of expert knowledge
centralising education system	*vs*	local dynamics and endogenous change

3.4 Successful Formal Education Programmes for Nomads

The few formal (mass) education programmes that have performed with some degree of success have the following characteristics:

- are delivered within a non-antagonistic cultural environment and can rely on a human interface strongly sympathetic with the nomadic culture;
- are supported by effective law enforcement;
- are free of charge;
- are matched by pastoral development policies successful in (a) decreasing labour intensity and (b) freeing children from the household's labour demand (e.g. Mongolia);
- are provided within an existing local education structure (e.g. Somalia);
- are 'planted' into an existing pastoral support ideology (e.g. Iran);
- can be delivered through any medium: mobile schools, boarding schools, radio.

3.5 Successful Non-Formal Education Programme for Nomads

On the other hand, successful non-formal basic education programmes have the following features:

- are delivered within a non-antagonistic cultural environment and can rely on a human interface strongly sympathetic with the nomadic culture;
- are based on two way processes, that is, are highly flexible in structure and content and maintain such flexibility over time, in order to be able to respond to changing needs;
- (in the case of primary education) the informal settings of the school environment allow parents close surveillance over physical and moral security of children (especially girls), that is parents can keep an eye on both what happens to the children during the lesson and what they are taught;
- are willing to acknowledge social, economic and political hindrances to pastoral livelihood security beyond pastoralists' control, and have the resources to provide skills *specifically* designed to increase that control (e.g. campaigning, lobbying, local advocacy, etc);

- interlace with existing government institutions for education and development.

Overall, the non-formal approach has proved more successful and cheaper to implement. However, as long as non-formal education is not recognised at the same level as formal schooling, both in administrative terms and in people's perceptions, its 'success' will ultimately be subject to its capacity to convey out-of-school children into otherwise unsuccessful, unresponsive formal education systems.

3.6 Education and Pastoral Livelihood

Recommendations for future policy in the literature insist on the importance of not separating support for education from support for pastoral livelihood and economy (Lambert 1999; MOEST 1999). Usually this is meant in the sense of integrating education provision into wider interventions concerning water, food and security. However, this should not encourage one to overlook the fact that over the last four decades pastoral development, overall, hasn't performed much better than nomadic education. Without a serious reconsideration of pastoral development assumptions, explanatory paradigms and goals, the integration of education into wider interventions may simply spread the blame. Cutting-edge theories in pastoral development have, since the mid-1990s, dismissed most of the theoretical equipment still in use today and particularly popular within the education sector. It is time that education policy making accepts the challenge of recent research and starts to operate with the present rather than the past horizon of pastoral development.

3.7 A Broader View

To date, as a universal project education has had a very broad goal (the fulfilment of all individuals as human beings) and a very narrow view (structure and content of the service), together with inaccurate evaluation of the process. With regard to education of nomads, at least, this review of the literature suggests that this attitude should be reversed: there is a need for a broader view and focused goals. Education policies should expand the view from just statistics and the classroom, to education as a broad phenomenon. This will offer the important advantage of including in the field of vision a whole range of situations and dimensions that appear to influence both the way education is received and its potential for fighting poverty, and which to date have been largely overlooked.

There is a need to study the relationship between these phenomena and potential new avenues for intervention: new education contexts beyond the classroom (for example, development projects, the market, herders' organisations); new dimensions, beyond that of the curriculum; new interactions and agents, beyond teacher-pupil; and new targets, beyond the non-literate.

An approach of this sort opens up new avenues for transforming education into a more positive and effective process. For example, if the resistance of nomads to formal education is a response to a wide range of phenomena of which the classroom is but one aspect, all conveying a feeling of cultural antagonism or aggression, then interventions focused exclusively at the classroom level – e.g. making the curriculum more appealing or the timetable more flexible – have little hope of success.

This kind of broader view would help to prevent current side-effects of the process of educating nomads, such as the brain drain from rural areas to the city, the loss of institutions for the generation, distribution and reproduction of endogenous knowledge, and the erosion of social capital.

The dynamic dimension of nomad culture and livelihood practices should be acknowledged: instead of exposing local people to global dynamics within a centre-periphery framework, it is necessary to enable local dynamics to develop locally by providing bridging institutions that allow local dynamics to articulate with national and global ones.

3.8 More Specific Goals

At the same time, education policies should use their broader vision in order to identify specific goals with pinpoint accuracy. There seems to be a growing awareness that education is first of all a political issue and that the social and political dimensions of nomad marginalisation must be recognised. If one of the goals of education is to empower nomads to successfully cope and interact with the new challenges raised by globalisation, as well as enabling them to gain political representation, then mass education is probably too expensive and too slow and may simply not be the best way. Specifically focused training may be much more effective and much faster. The experience of Senegal with lobbying and local advocacy training amongst adult pastoral Fulani offers a good example (ARED 2000; ARED & CERFLA 1998).

Once it is recognised that pastoral marginalisation is first and foremost the result of social and political forces operating within national society, it should be clear that standard education as such has very little chance to make pastoralists competitive in political representation. It is necessary to follow the process through all its phases and to identify the actual routes and barriers to success (for example selective criteria or unofficial practices for assigning scholarships for further education) and to take the necessary actions either to satisfy or by-pass them. Nomad 'empowerment' within the national context requires a rather radical change in the culture of mainstream society, the culture that creates the condition of disempowerment in the first instance. This sort of empowerment will not be achieved by education programmes designed to change nomads in order to maintain the hegemonic culture as it is (starting from the education system itself).

3.9 Cultural Identity and Education

When addressing the issue of the education of nomads, it is too often overlooked that to be a nomad means also to have a cultural identity, to be a Rendille, a Rabari, a Kazhan, a Wodaabe, a Phala, a Qashqa'i, a Tungus, a Harasiis… and so on. Not a state of wretchedness, not the result of exclusion, but an identity people are proud of, a complex and sophisticated way of life that, even with all its harshness, they may profoundly love.

The history of mass education programmes with nomads is the history of the encounter between people who are looking for new ways to affirm the life they love in relation to new living conditions brought in by globalisation, and people who ultimately believe that that way of life is worthless or obsolete, and that nomads are to be saved from it. On both sides, this is a kind of knowledge that remains implicit, part of what Maurice Bloch (1998) has called 'what goes without saying'.

Knowledge though is culture, and it is around such a cultural clash that educational policy concerns take form: children's fundamental rights, empowerment, poverty alleviation, increase of productivity. It is around such a cultural clash that the 'problem' of delivering mass education to nomads is framed: mobility, cultural conservatism, parents' ignorance, and child labour. Finally, it is around such a cultural clash that solutions for policy implementation are devised: sedentarisation, modernisation, curriculum relevance, even cultural sensitivity and responsiveness.

The crucial point here, is the need to see the cultural dimension of the observers' means of knowledge, to learn to 'see' one's own culture, not just the 'culture' of the nomads. In Bloch's words, to see 'what goes without saying'. For example, how the idea of education as a universal project is constantly justified on the basis of beliefs, myths and tradition. To learn to see how its universality is itself culturally located, a belief with its own tradition and, perhaps, one that it is about time to leave behind.

3.10 The Next Step

There is a need to link, more successfully, the practice of education and issues of nomadic pastoral culture and society, particularly the relationship between culture, local knowledge, social institutions and poverty. At present, formal education often undermines this nexus, without providing a viable alternative for those who wish to remain in the pastoral livelihood system. An effective educational system for nomadic pastoralists would help pastoralists to cope both with pastoral and non-pastoral livelihoods.

More effective schooling in this respect means teaching and learning which recognises that the knowledge, skills and attitudes needed for effective herding under pastoral conditions are likely to:

- value pastoral livelihood systems as appropriate and technically adapted to their environment;
- equip pastoralists to adapt in dynamic ways to changes in the pastoral livelihood system resulting from external influences;
- be based in part on indigenous or local expert knowledge;
- be intricately linked to wider features of social organisation and institutions;
- recognise that pastoral children may need to be equipped for life in other livelihood systems, but do not assume this is the main objective of their schooling.

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